

Appendix K.

Sample Recovery Outlines



United States Department of the Interior

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In Reply Refer To:
FWS/Region 5/ES-TE

MAR - 8 2001

To: Director (AES)
From: Acting Regional Director, Region 5
Subject: Atlantic Salmon Recovery Outline

The National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (FWS) Northeast Regional offices have completed the attached recovery outline for the recently listed Distinct Population Segment (DPS) of Atlantic salmon. Mark Minton, Atlantic salmon recovery specialist with NMFS, coordinated preparation of the document, with input from our Fisheries and Endangered Species divisions. The NMFS and FWS are now proceeding jointly with recovery planning for the DPS. If you have any questions, please call Paul Nickerson, Endangered Species Coordinator, at 413-253-8615.

Malarker

Attachment

**Recovery Outline for the Gulf of Maine
Distinct Population Segment (DPS) of Atlantic Salmon (*Salmo salar*)**

Species Name: Atlantic salmon (*Salmo salar*)

Date Listed: December 18, 2000

Listing Factors:

(1) The Present or Threatened Destruction, Modification, or Curtailment of Habitat or Range

Demonstrated and potential impacts to Atlantic salmon habitat within the DPS watersheds result from the following causes: (1) water extraction; (2) sedimentation; (3) obstruction to passage including those caused by beaver, debris dams and poorly designed road crossings; (4) input of nutrients; (5) chronic exposure to herbicides, fungicides and pesticides; (6) elevated water temperatures from processing water discharges; and (7) removal of vegetation along streambanks.

(2) Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Under current fisheries regulations, no commercial or recreational harvest of DPS Atlantic salmon is allowed in state or federal waters in the US. Similarly, Canada, also prohibits all commercial harvest of Atlantic salmon off Labrador and Newfoundland. In 1999, Greenland signed a two-year agreement to limit the fishery in West Greenland to internal use only. DPS salmon are taken in low numbers by this fishery. Additionally, a small fishery exists off St. Pierre et Miquelon, a French territory off the coast of Newfoundland. Historically, the fishery has been very limited in scope.

(3) Disease or Predation

Infectious Salmon Anemia (ISA), a serious and untreatable fish disease, was detected in the Canadian aquaculture industry for the first time in 1996. ISA has been detected in aquaculture escapees and wild fish. The occurrence of the disease has moved progressively closer to the US. Some US net pen sites in Cobscook Bay are close enough to fall within the ISA positive "quarantine zones" in Canadian waters, raising concerns about the potential for this disease to infect US aquaculture and wild salmon stocks. Detection of a new disease, Salmon Swimbladder Sarcoma (SSSV), led to the destruction of Pleasant River broodstock. There has been a significant increase in predators including seals, striped bass and comorants. The threat from predation is determined to be significant because of low numbers of adult salmon.

(4) Inadequacy of Existing Regulatory Mechanisms

Threats continue from: water withdrawals, disease, potential aquaculture impacts. Existing regulatory mechanisms either lack the capacity or have not been implemented adequately to decrease or remove the threats to wild salmon.

(5) Other natural and Manmade Factors Affecting the Species Continued Existence

Aquaculture escapees have been detected annually in DPS rivers since 1990. The first sexually mature fish were documented in 1996. In recent years, escaped aquaculture fish account for 2% to 100% of the total salmon returns to some DPS rivers. Escaped farmed salmon have the potential to disrupt the redds of wild salmon; compete

with wild salmon for food and/or habitat; interbreed with wild salmon, leading to disruption of local adaptations, threatening stock viability and lowering recruitment leading to the extinction of wild salmon populations; transfer disease or parasites to wild salmon.

Marine survival rates continue to be low for U.S. stocks of Atlantic salmon, despite recent improvement in marine environmental conditions, which impedes the recovery of the DPS. Natural mortality in the marine environment can be attributed to stress, predation, starvation, disease, parasites and abiotic factors. Sea surface temperature is thought to be an important feature of the marine environment affecting Atlantic salmon survival. Scientists have concluded that a significant proportion of the variation in recruitment or return rate is attributed to post-smolt survival. It is theorized that the transition from freshwater to the marine environment accounts for a high proportion of the total at sea mortality. However, the factors responsible for reduced post-smolt survival are not well understood.

Population Trend: Decreasing

Recovery Priority Number: 2C

This ranking, determined in accordance with the Recovery Priority Criteria at 48 FR 51985, is based on a high degree of threat, a high potential for recovery and a taxonomic classification as a species.

Lead Region/Cooperating Regions:

The National Marine Fisheries Service (NMFS), Northeast Region and the United States Fish and Wildlife Service (FWS), Region 5 are the lead regions with responsibility for preparing and implementing a recovery plan for Atlantic salmon.

Land Ownership Patterns:

Rivers that support known persistent runs of naturally reproducing Atlantic salmon are located in the State of Maine in Washington, Waldo and Franklin Counties. Forestry is the dominant land use in the five downeast watersheds (Dennys, East Machias, Machias, Pleasant and Narraguagus). International Paper Corporation, a private forestry company, is the largest landowner within the five downeast watersheds. Georgia Pacific Corporation, a private forestry company, is a major landowner in the Dennys and East Machias river watersheds. There is a mix of private state, federal and tribal lands located within Washington County. The majority of land within the Cove Brook, Ducktrap and Sheepscot watersheds is privately owned. While conservation easements exist for portions of the riparian habitat located along all DPS rivers and tributaries, the majority of these lands are privately owned.

Key Threats:

Key threats include:

- Documented adult returns declined significantly in the 1980s and remain at critically low levels of abundance;
- Critically low adult returns make the DPS especially vulnerable and genetically susceptible to threats;
- Early Juvenile abundance has increased due to fry stocking but has not resulted in a corresponding increase in parr and smolt survival rate (suggests a factor or factors within the rivers that may be negatively impacting freshwater habitat);
- Excessive or unregulated water withdrawal remains a threat;
- Continuation of the take of Atlantic salmon of U.S. origin through a directed fishery such as the internal-use only fishery in Greenland and the small fishery that exists off St. Pierre et Micquelon, a French territory off the coast of Newfoundland pose a continuing threat;

- Threat of predation is significant today because of the low numbers of returning adults and dramatic increases in some predators;
- Concern for disease has increased due to the discovery and expansion of ISA and SSSV;
- Certain existing aquaculture practices, including the use of gamets from European origin Atlantic salmon and the escape of such fish from net pen and hatchery facilities.

These threats, which were key factors in the listing determination, continue to imperil the continued existence of Atlantic salmon and will be considered during the recovery planning process.

Scope of the Recovery Effort:

Species X Recovery Unit Multi-species Ecosystem International

Recovery Plan Preparation:

The NMFS, Northeast Region and the FWS, Region 5 will initiate the preparation of the recovery plan for the Gulf of Maine DPS of Atlantic salmon in early 2001. The Services will determine the scope of the plan and the appropriate level of public and private partners in the planning process (e.g., recovery team structure: technical team/implementation team, number of public meetings/hearings etc.). The ESA establishes an 18 month time frame for preparation of a draft recovery plan with the final plan due within 2 ½ years of the listing. Primary authorship of the Recovery Plan will be the responsibility of Service staff, though State partners will be heavily involved in all phases of the planning and implementation processes. Existing documents such as the State of Maine Atlantic Salmon Conservation Plan will aid considerably in the planning effort. Outreach by the Services to State, Federal and private partners will be central to the recovery effort.

Anticipated Recovery actions:

1. **Recovery Team**
 - a. The Services anticipate appointing a Recovery Team comprised of individuals capable of advising the Services on appropriate recovery population thresholds and short- and long-term actions necessary to recover Atlantic salmon
 - b. Prepare an outline of the recovery planning and implementation process
 - c. Establish scientifically-based recovery criteria seeking the advise of the Maine Atlantic Salmon Technical Advisory Committee and other species and management experts.
 - d. Provide opportunities for public input into the recovery planning process.
 - e. Evaluate and incorporate appropriate portions of existing management plans, including the Maine Conservation Plan, into the recovery process and recovery plan.
 - f. Develop and implement watershed specific recovery plans by working with state, local and private organizations including watershed councils and industry.
2. **Protect Atlantic salmon habitat using existing laws and conservation opportunities**
 - a. Work with state agencies to evaluate best management practices and existing regulatory programs to determine their adequacy in protecting Atlantic salmon and their habitat
 - b. Consult with federal action agencies to secure adequate protection for salmon and their habitat
 - c. Utilize Section 5 of the ESA to protect Atlantic salmon habitat through easements and/or acquisitions.
 - d. Assess the potential to develop an ESA Section 6 (c)(1) Cooperative Agreement with the State of Maine, Atlantic Salmon Commission to allow for them to compete for Federal funds to carry out the recovery of the species.

- e. Assess the potential use of and/or need for Habitat Conservation Planning (section 10(a)(1)(B)) for non-federal actions (i.e., agricultural practices) and affected parties (i.e., private landowners)
 - f. Identify, implement and evaluate habitat restoration strategies and approaches to restore degraded habitat for Atlantic salmon.
 - g. Identify and evaluate critical habitat (physical, chemical and biological) for all life stages of Atlantic salmon in freshwater, estuarine and marine environments.
3. **Stock enhancement and recovery efforts**
- a. Utilize fish cultural production techniques to enhance the recovery rate of wild populations, using breeding protocols designed to avoid negative impacts to the genetic structure of the DPS
4. **Population assessment and monitoring activities**
- a. Evaluate factors affecting estuarine and near-shore ocean survival of smolts and postsmolts
 - b. Evaluate factors affecting freshwater survival
 - c. Evaluate factors affecting smolt production of the Gulf of Maine distinct population segment of Atlantic salmon
 - d. Evaluate effectiveness of river-specific stocking efforts utilizing genetic techniques, tagging, tracking and other means
 - e. Develop a Population Viability Analysis (PVA) to evaluate the relative impact of mortality sources on long-term prospects for restoration and recovery of Atlantic salmon stocks to help establish recovery goals for each river and the DPS.
5. **Monitor and minimize threats posed by existing aquaculture operations**
- a. Work with state and federal agencies and industry to develop protocols and methods to minimize potential threats posed to wild salmon by aquaculture industry practices and facilities.
6. **Investigate and monitor the threat posed to Atlantic salmon by disease**
- a. Assist state, federal and private salmon culture entities in order to maintain and monitor the health of aquatic resources and to help ensure that wild and cultured salmon are not adversely impacted by the introduction of infectious agents.
 - b. Support research conducted by state, federal and private groups to gather biological data on infectious agents and their interactions with salmonid and non-salmonid hosts
 - c. Monitor emerging disease threats by monitoring disease events occurring in Atlantic salmon culture facilities in other countries to help identify potential problems and provide an opportunity to implement preventive measures
7. **Commercial fisheries beyond the jurisdiction of the United States**
- Pursue efforts through international fora such as NASCO, to reduce threats to Atlantic salmon posed by fisheries in Greenland and St. Pierre et Micqualon
8. **Determine extent of threat posed by predation (e.g., marine mammals, seabirds, fish)**
- a. Support research designed to assess the level of threats posed by interactions between wild salmon and potential predators (i.e., seals, cormorants, striped bass etc).
 - b. Pursue means to reduce any threats determined to be substantial.

9. Conduct education and outreach activities

- a. Establish webpage to provide information on the recovery plan process
- b. Conduct other outreach activities to the fullest extent possible within available resources such as hosting (public meetings, developing and presenting educational materials and programs for the schools and other groups), and participating in conferences addressing recovery of the Atlantic salmon.
- c. Insure that appropriate personnel in both Services are kept up to date as planning and implementation proceed.

Conclusion: The above actions are believed to be integral to the development and implementation of a recovery plan for Atlantic salmon. The recovery plan will likely incorporate these and other actions identified during the recovery planning process.

Approval:

MaParke
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Regional Director, Region 5
U.S. Fish and Wildlife Service

Regional Director, Northeast Region
National Marine Fisheries Service

REVISED RECOVERY OUTLINE (Version: May 30, 2001)
O`ahu `elepaio from Hawai`i

Species Name:

Common: O`ahu `elepaio Scientific: *Chasiempis sandwichensis ibidis*

Date Listed: May 18, 2000

Population Trend: Decreasing

Recovery Priority Number: 3

Lead Region/Field Office: 1/Honolulu

Land Ownership Pattern:

- **Federal:** Major parcels include U.S. Naval Magazine Pearl Harbor Lualualei Branch, U.S. Army Schofield Barracks, U.S. Army Mākua Military Reservation, U.S. Army Kawaiiloa Training Area, and U.S. Fish and Wildlife Service O`ahu Forest National Wildlife Refuge.
- **State of Hawai`i:** Major land parcels include Honolulu Watershed Forest Reserve (FR), Waimānalo FR, `Ewa FR, Waiāhole FR, Kaipapa`u FR, Nānākuli FR, Wai`anae Kai FR, Mokulē`ia FR, Mākua-Kea`au FR, Kuaokalā FR, Pūpūkea-Paumalū FR, Pahole Natural Area Reserve (NAR), Ka`ala NAR, Kahana Valley State Park, and Keāiwa Heaiau State Recreation Area.
- **City and County of Honolulu:** Major land parcels include upper Mākaha Valley and portions of Mānoa, Pālolo, and Wailupe valleys.
- **Private:** Major land owners include Kamehameha Schools (north Hālawa Valley, Kapakahi Gulch, Wai`alae Nui Ridge and Gulch), James Campbell Estate (Honouliuli Preserve), Samuel Damon Estate (Moanalua Valley), Waiāhole Irrigation and SMF Enterprises (Waianu and Waikāne Valleys), Queen`s Medical Center (Tripler Ridge and south Hālawa Valley), Bishop Museum (Kalauao Valley), James Pflueger (upper Pia Valley), Benjamin Cassiday (lower Pia Valley), Hawai`i Humane Society (Kūpaua Valley), and Joseph Paiko Trust (western Kuli`ou`ou Valley).

Scope of the Recovery Effort: Species/Multispecies. The revised Hawaiian Forest Bird Recovery Plan will include 19 listed species, 1 candidate species, and 1 species of concern, but the `elepaio is the only species on O`ahu for which recovery efforts beyond continued surveying are planned. The recovery goals, criteria, and actions specified in this revised recovery outline reflect the Hawaiian Forest Bird Recovery Team`s discussions through May 4, 2001.

Listing Factors/Current Threats:

- **Small Population Size** - The current population of O`ahu `elepaio is small, approximately 1,982 birds distributed in six core subpopulations and several smaller subpopulations (Table 1, Figure 1; VanderWerf *et al.* 2001). The only previous population estimate (200-500 birds; Ellis *et al.* 1992) was not accurate because little information was available when the estimate was made. The number of birds is divided about evenly between the Wai`anae Mountains in the west and the Ko`olau Mountains in the east, with three core subpopulations in each mountain range. At least seven tiny remnant subpopulations consisting entirely of males remain in both the Wai`anae and Ko`olau mountains (Table 1), but because there is no chance of reproduction and rescue by immigration is unlikely, these relicts probably will disappear in a few years as the last adults die.

The breeding population, about 1,774 birds, is less than the total population because of a male-biased sex ratio; only 84% of territorial males have mates in large populations ($n = 147$, E. VanderWerf unpubl. data), and many small, declining populations contain mostly males (Table 1). The genetically effective population size is probably even smaller than the breeding population because of the geographically fragmented distribution (Grant and Grant 1992). Natal dispersal distances in `elepaio are usually less than one kilometer (0.62 miles) and adults have high site fidelity (VanderWerf 1998), but most `elepaio populations on O`ahu are separated by many kilometers of unsuitable urban or agricultural land. There may be some exchange among subpopulations within each mountain range, but dispersal across the extensive pineapple fields that separate the Wai`anae and Ko`olau mountains is unlikely, and most subpopulations probably are isolated. The current distribution superficially appears to constitute a metapopulation (Hanski and Gilpin 1997), but this would be true only if dispersal occurred among subpopulations. There have been no observations of banded `elepaio moving among subpopulations. The genetic population structure is unknown.

- **Decline in Range** - Despite its adaptability and tolerance of disturbance, the O`ahu `elepaio has declined seriously and has disappeared from many areas where it was formerly common (Shallenberger 1977, Shallenberger and Vaughn 1978, Williams 1987, VanderWerf *et al.* 1997, VanderWerf *et al.* 2001). Before humans arrived, forest covered about 127,000 hectares (ha) on O`ahu (Figure 2; Hawai`i Heritage Program 1991), and it is likely that `elepaio once inhabited much of that area. `Elepaio are generalized in habitat selection and are able to forage and nest in a variety of plant species (Conant 1977, VanderWerf 1993, 1994, 1998). Reports by early naturalists indicate that the O`ahu `elepaio once had a “universal distribution” (Perkins 1903), occurred “from the sea to well up into the higher elevations” (Bryan 1905), and was “abundant in all parts of its range” (MacCaughy 1919).

The aggregate geographic area occupied by all current subpopulations is approximately 5,657 ha (13,792 ac; Table 1). The O`ahu `elepaio thus currently occupies only about 4% of its original prehistoric range, and its range has declined by roughly 96% since humans arrived in Hawai`i 1,600 years ago (Kirch 1982). In 1975, `elepaio inhabited approximately 20,900 ha

on O`ahu, almost four times the area of the current range (Figure 2, VanderWerf *et al.* 2001). The range of the O`ahu `elepaio has thus declined by roughly 75% in the last 25 years.

- **Reasons for Decline and Current Threats** - Much of the historical decline of the O`ahu `elepaio can be attributed to habitat loss, especially at low elevations. Fifty-six percent of the original prehistoric range has been developed for urban or agricultural use, and practically no `elepaio remain in developed areas (VanderWerf *et al.* 2001).

However, many areas of O`ahu that recently supported `elepaio and still contain apparently suitable forest habitat are currently unoccupied, demonstrating that habitat loss is not the only threat. More recent declines in O`ahu `elepaio populations are due to a combination of low adult survival and low reproductive success. Both annual adult survival and reproductive success are lower on O`ahu (0.76, 0.33, respectively) than in a large, stable `elepaio population at Hakalau Forest National Wildlife Refuge on Hawai`i Island (0.85, 0.62; VanderWerf 1998). The main cause of reduced adult survival on O`ahu appears to be diseases that are carried by the introduced southern house mosquito (*Culex quinquefasciatus*). Annual survival of birds with active avian pox (*Poxvirus avium*) lesions (60%) was lower than annual survival of healthy birds (80%; E. VanderWerf unpubl. data). Avian malaria (*Plasmodium relictum*) is a serious threat to many Hawaiian forest birds (Warner 1968, van Riper *et al.* 1986, Atkinson *et al.* 1995), but its effect on `elepaio has not been investigated.

The primary reason for low reproductive success is nest predation by the introduced black rat (*Rattus rattus*). An experiment in which automatic cameras were wired to artificial `elepaio nests containing quail eggs showed that a black rat was the predator in all 10 predation events documented (VanderWerf 2001). Control of rats with snap traps and diphacinone (an anticoagulant rodenticide) bait stations was effective at improving `elepaio reproductive success, resulting in a 76% increase in nest success and a 112% increase in fledglings per pair compared to control areas (VanderWerf 1999). Reproductive success of `elepaio is also affected by disease. Pairs in which at least one bird had pox lesions produced fewer fledglings than healthy pairs or those in which at least one bird had recovered from pox (E. VanderWerf, unpubl. data). Many birds with active pox infections did not even attempt to nest, and infected birds were sometimes deserted by their mate.

Recovery Goals:

The recovery goals listed below were developed by the Hawaiian Forest Bird Recovery Team for use in the draft revised Hawaiian Forest Bird Recovery Plan. Similar recovery goals are being used for all species covered by the Recovery Plan.

- 1) Restore populations of O`ahu `elepaio to levels that allow persistence despite demographic and environmental stochasticity and that permit natural ecological and evolutionary processes to occur.
- 2) Protect enough habitat to support these populations.
- 3) Identify and remove threats responsible for the decline of the O`ahu `elepaio.

Recovery Criteria:

The recovery criteria listed below were developed by the Hawaiian Forest Bird Recovery Team for use in the upcoming draft revised Hawaiian Forest Bird Recovery Plan. Criterion 1 was adapted to each species based on its particular life history and recovery needs; criteria 2 and 3 are the same for all species covered by the plan.

The O`ahu `elepaio can be downlisted from endangered to threatened when all 3 of the following have been achieved:

- 1) The six existing core subpopulations in Waikāne/Kahana, southern Ko`olau, central Ko`olau, Honouliuli/Lualualei, Schofield Barracks West Range, and Mākaha/Wai`anae Kai/Mākua, which represent the ecological, morphological, behavioral, and genetic diversity of the species, are viable (as defined in criterion 2 below); or these subpopulations function as viable metapopulations on both the windward and leeward sides of the Ko`olau and Wai`anae Mountains;
- 2) Either a) quantitative surveys show that the number of individuals in each population or metapopulation has been stable or increasing for 15 consecutive years, or b) demographic monitoring shows each population or metapopulation has an average intrinsic growth rate (λ) not less than 1.0 for at least 15 consecutive years; and total population size is not expected to decline by more than 20% within the next 15 consecutive years for any reason; and
- 3) Sufficient recovery habitat is protected and managed to achieve criteria 1 and 2 above, and the major threats that were responsible for the decline of the O`ahu `elepaio have been identified and controlled.

The O`ahu `elepaio can be delisted (removed from the endangered species list) when:

- Criterion 2 above has been achieved for at least 30 consecutive years; and
- Criteria 1 and 3 above are still true.

`Elepaio from different areas of O`ahu vary in appearance and behavior, and there also may be genetic variation. Birds from the wet windward (eastern) side of each mountain range are darker and more red in color than birds from the drier leeward side, and vocalizations are noticeably different in the Wai`anae and Ko`olau Mountains (E. VanderWerf, unpubl. data). The six core subpopulations listed in criterion 1 above are distributed throughout the island, and their recovery would preserve birds representing the known variation in the species. It is unlikely that each existing core subpopulation will be viable on its own, and a metapopulation composed of several subpopulations may be necessary in each portion of the island to preserve the species' variation.

Setting a criterion of demographic persistence highlights the need for monitoring, and helps ensure that threats have been adequately managed and that population increases are not transient. A λ value of 1.0 indicates no change in population size, a value greater than 1.0 indicates population growth. If populations are stable or increasing in the long-term despite periodic episodes of increased disease and predation, then the species can be considered recovered.

Research to date indicates that survival and reproduction of `elepaio fluctuate from year to year, probably due to variation in disease prevalence and predator (rodent) populations (VanderWerf 1999, unpubl. data). Epizootics of disease and irruptions in rodent populations appear to occur approximately once every five years (VanderWerf 1999), possibly in association with rainfall patterns, so the time frames for demographic recovery criteria likely coincide with either three (15 years for downlisting) or six (30 years for delisting) `elepaio population cycles.

Anticipated Recovery Actions

- **Appoint Recovery Team** - The Pacific Islands Fish and Wildlife Office has already assembled a Hawaiian Forest Bird Recovery Team that provides guidance on most listed forest birds in the State of Hawai`i, including the O`ahu `elepaio.
- **Prepare Recovery Plan** - The Hawaiian Forest Bird Recovery Team is in the process of revising the recovery plan for 21 Hawaiian forest bird species, including the O`ahu `elepaio. The O`ahu `elepaio was not included in the previous version of the recovery plan because it was not listed at that time; it is being added to the revised recovery plan. The Pacific Islands Fish and Wildlife Office plans to submit the revised recovery plan to the Regional Office by September 30, 2001.
- **Acquire Habitat** - The new O`ahu Forest National Wildlife Refuge protects 1,831 ha (4,525 ac) in the central Ko`olau Mountains that provides suitable forest habitat for `elepaio (USFWS 2000b). `Elepaio are not currently found on the refuge, but the area has high potential for recovery of `elepaio through reintroduction and predator control.
- **Recovery Habitat** - Draft recovery habitat for the O`ahu `elepaio has been identified for the revised Hawaiian Forest Bird Recovery Plan (Figure 2). Recovery habitat is defined as those areas that will allow for the long-term survival and recovery of the species.

`Elepaio are adaptable and able to forage and nest in a variety of forest types composed of both native and introduced species (Conant 1977, VanderWerf 1993, 1994, 1998). Nest site selection by `elepaio is non-specialized; nests have been found in seven native and 13 introduced plant species (E. VanderWerf, unpubl. data). Shallenberger and Vaughn (1978) found the highest relative abundance of `elepaio in forest dominated by introduced guava (*Psidium* sp.) and kukui (*Aleurites moluccana*) trees, but they were also found in the following forest types (in order of decreasing abundance): mixed native-exotic; tall exotic; koa (*Acacia koa*) dominant; mixed koa-`ōhi`a (*Metrosideros polymorpha*); low exotic; `ōhi`a dominant; and `ōhi`a scrub. VanderWerf *et al.* (1997) found that (1) forest structure was more important to `elepaio than plant species composition, (2) most `elepaio occurred in areas with a continuous forest canopy and a dense understory, and (3) population density was roughly twice as high in tall riparian vegetation in valleys than in scrubby vegetation on ridges. Suitable habitat for recovery of O`ahu `elepaio thus includes wet, mesic, and dry forest consisting of native and/or introduced plant species, but higher population density can be expected in closed canopy riparian forest.

The area currently occupied by the O`ahu `elepaio represents only about four percent of the species' original range, and the distribution has contracted into numerous small fragments (Figure 2). The remaining `elepaio subpopulations are small and isolated, comprising six core subpopulations that contain between 100 and 500 birds, and numerous small remnant subpopulations, most of which contain fewer than 10 birds (Table 1). Even if the threats responsible for the decline of the `elepaio were controlled, the existing subpopulations would be unlikely to persist because their small sizes make them vulnerable to extinction due to a variety of natural processes, including: reduced reproductive vigor caused by inbreeding depression; loss of genetic variability and evolutionary potential over time due to random genetic drift; stochastic fluctuations in population size and sex ratio; and catastrophes such as hurricanes (Lande 1988, IUCN 2000).

`Elepaio are highly territorial; each pair defends an area of a certain size, depending on the forest type and structure, resulting in a maximum population density or carrying capacity (VanderWerf 1998). Although `elepaio have declined and the range has contracted, density in the remaining core subpopulations is high, and much of the currently occupied land is at or near carrying capacity (VanderWerf *et al.* 1997, in press). Consequently, the currently occupied areas are too small to support `elepaio populations large enough to be considered safe from extinction. Complete recovery will require restoration of `elepaio in areas where they do not occur at present, through translocation, captive propagation and release, or natural dispersal. The draft recovery habitat therefore includes areas that currently are not occupied by `elepaio, but that still contain suitable forest.

`Elepaio are also relatively sedentary; adults have high fidelity to their territory and juveniles rarely disperse more than one km (0.62 mi) in search of a territory (VanderWerf 1998). Because the areas currently occupied by `elepaio are separated by many kilometers (Figure 1) and `elepaio are unlikely to disperse long distances, the existing subpopulations probably are isolated (VanderWerf *et al.* in press). The O`ahu `elepaio evolved in an environment with large areas of continuous forest habitat covering much of the island (Figure 2), and their dispersal behavior is not adapted to a fragmented landscape. In the past, subpopulations were less isolated and dispersal and genetic exchange among subpopulations probably were more frequent. Maintaining or restoring links among subpopulations by providing habitat for dispersal would increase the overall effective population size through meta-population interactions, thereby helping to alleviate the threats associated with small population size. In particular, enlargement of small subpopulations by expansion onto adjacent lands not only would increase the chances of their long-term survival, but also would improve connectivity among subpopulations by enhancing their value as "stepping stones" within the distribution of the entire population.

Based on the information provided above, the Hawaiian Forest Bird Recovery Team has drafted recovery habitat using the following criteria:

- (1) All areas that are currently occupied by the O`ahu `elepaio, excluding one very small,

isolated area at Hau`ula that contains only a single male (Figure 1; subpopulation Q).

(2) Addition of currently unoccupied lands needed for recovery of a viable population. Lands were considered to have greater recovery value and were given preference if they (a) provided more preferred forest types, (b) were more recently occupied, or (c) were contiguous and formed large blocks of suitable habitat and helped link existing subpopulations.

(3) Boundaries of draft recovery habitat units were determined by the extent of suitable forest, which in many areas coincided with the boundaries of State Forest Reserves, Natural Area Reserves, and other conservation lands. Urban and agricultural lands generally were not included because they did not contain suitable forest, but lower Wailupe Valley, which is zoned for urban use but has not been developed yet, was included because it contains suitable forest and is currently occupied by `elepaio.

The potential `elepaio population in the draft recovery habitat (10,104 birds) was estimated by multiplying the area of each recovery habitat unit by the current density of `elepaio in each part of the island (Table 2). These estimates are approximate, and the actual population in each unit may be larger if density can be increased beyond current levels, or lower if it proves difficult to establish dense populations in some currently unoccupied areas.

- **Rodent Control** - Rodent control has been an effective method of improving reproductive success of `elepaio in several areas (VanderWerf 1999, in press), and control programs should be continued and expanded. Ground-based methods of rodent control using snap traps and diphacinone bait stations have been effective on a small scale, but are labor intensive. Large-scale rodent control probably will be necessary for recovery of `elepaio, and this can be achieved more efficiently through aerial broadcast methods. Registration of aerial broadcast of diphacinone for rodent control with the U.S. Environmental Protection Agency should be actively pursued and supported.
- **Fencing and Feral Ungulate Control** - The actions of feral pigs and other ungulates may not be an important direct threat to the O`ahu `elepaio, but due to concerns about secondary poisoning and the threat to hunters it is possible that aerial broadcast of rodenticide may be feasible only in fenced areas that are considered free of feral pigs. Fencing and pig eradication are therefore an important part of the recovery strategy for `elepaio.
- **Research on Disease Resistance** - No areas of O`ahu are of sufficient elevation to be free from disease-carrying mosquitoes (Warner 1968), and all O`ahu `elepaio populations appear to be affected by disease (E. VanderWerf, unpubl data). Reducing mosquito numbers by removing breeding sites or treating them with larvicides would be extremely difficult due to the abundance of breeding sites (C. Atkinson and D. LaPointe, pers. commun.). The best method of reducing the threat from disease may be to investigate disease resistance and its genetic basis to identify birds for use in captive propagation and release.

- **Captive Propagation** - Captive propagation and/or rear and release of O`ahu `elepaio may become necessary if reproduction in the wild is insufficient to allow recovery, and would be especially valuable if genetically disease-resistant birds can be identified for use as breeding stock. Any attempts at captive propagation should use eggs taken from birds known to have recovered from pox or identified as resistant. If rat-free or disease-free refugia can be created by habitat management, translocation of wild birds or release of captive birds could be an effective means of re-establishing or augmenting populations in those areas.
- **Population Surveys and Monitoring** - To determine whether the overall recovery strategy is effective and whether the recovery criteria have been met it will be necessary to conduct range-wide population surveys and/or monitor demography. Standard survey routes should be established to determine distribution and measure population density. Surveys should be conducted at least once every five years to address whether the recovery criteria have been met, and annually if possible to more closely monitor population trends and fluctuations. Demographic monitoring will require mist-netting, banding, and resighting of birds to measure survival rate, nest searching and monitoring to measure reproductive success, and data analysis. Measurement of demographic parameters should follow methods used in VanderWerf (1999). Depending on what data is available, calculation of lambda values should follow Pulliam (1988), Pease and Grzybowski (1995), Caswell (1989), or another peer-reviewed method appropriate for measuring avian demography.
- **Consult and Work with Federal and State Agencies and Private Interests** - Rodent control using snap traps and diphacinone bait stations has been conducted by the Hawai`i State Division of Forestry and Wildlife in the Honolulu Watershed Forest Reserve since 1997, by the U.S. Army Environmental Division at Schofield Barracks West Range and Mākua Military Reservation since 1998, and by The Nature Conservancy of Hawai`i at Honouliuli Preserve since 2000. These groups are committed to continuing their rodent control programs in the future, and the Service is working with Kamehameha Schools to begin rodent control in North Hālawā Valley and Kapakahi Gulch.

Researchers at the University of Hawai`i are using blood samples collected during previous demographic research to investigate genetic population structure of O`ahu `elepaio, and hope to identify genetic markers associated with disease resistance (VanderWerf 1999).

The Zoological Society of San Diego has begun captive breeding of the Hawai`i `elepaio (*C. s. sandwichensis*) as a surrogate to develop techniques for a possible captive propagation or rear and release program for the O`ahu `elepaio.

Table 1. Estimated size and area of O`ahu `elepaio subpopulations. Data from VanderWerf *et al.* (2001). Letters in front of each population correspond to those on Figure 1.

Subpopulation	Total population size	Breeding population size	Area (ha)
Wai`anae Mountains			
A. southern Wai`anae (Honouliuli Preserve, Lualualei Naval Magazine)	458	418	1,170
B. Schofield Barracks West Range	340	310	532
C. Mākaha, Wai`anae Kai Valleys	123	112	459
D. Pahole, Kahanahāiki	18	4	256
E. Schofield Barracks South Range	6	0	20
F. Mākua Valley	7	2	49
G. Ka`ala Natural Area Reserve	3	0	21
H. Makaleha Gulch	2	0	7
I. Kuaokalā	3	2	14
J. Kaluakauila Gulch	1	0	6
Ko`olau Mountains			
K. southern Ko`olau (Pia, Wailupe, Kapakahi, Kuli`ou`ou, Wai`alae Nui)	475	432	1,063
L. Waikāne, Kahana Valleys	265	242	523
M. central Ko`olau (Moanalua, north and south Hālawa, `Aiea, Kalauao)	226	206	1,396
N. Pālolo Valley	46	42	78
O. Waihe`e Valley	5	4	32
P. Mānoa	2	0	19
Q. Hau`ula	1	0	4
R. Waianu Valley	1	0	8
TOTAL	1,982	1,774	5,657

Table 2. Area of recovery habitat units and potential `elepaio populations. Unit 4 is not currently occupied by `elepaio; the density used to estimate the potential `elepaio population of this unit is an average of the densities in the two nearest units, central and southern Ko`olau.

Recovery habitat unit	Area	`elepaio density in currently occupied parts of unit	Potential `elepaio population in unit
1. Northern Wai`anae Mountains	4,501 ha 11,122 ac	0.45 per ha 0.18 per ac	2,025
2. Southern Wai`anae Mountains	2,515 ha 6,215 ac	0.39 per ha 0.16 per ac	981
3. Central Ko`olau Mountains	14,840 ha 36,669 ac	0.33 per ha 0.14 per ac	4,897
4. Kalihi-Kapālama	800 ha 1,977 ac	0.39 per ha 0.16 per ac	312
5. Southern Ko`olau Mountains	4,197 ha 10,371 ac	0.45 per ha 0.18 per ac	1,889
All Units	26,853 ha 66,354 ac	0.38 per ha 0.15 per ac	10,104

Signature of Regional Director, U.S. Fish and Wildlife Service

Date

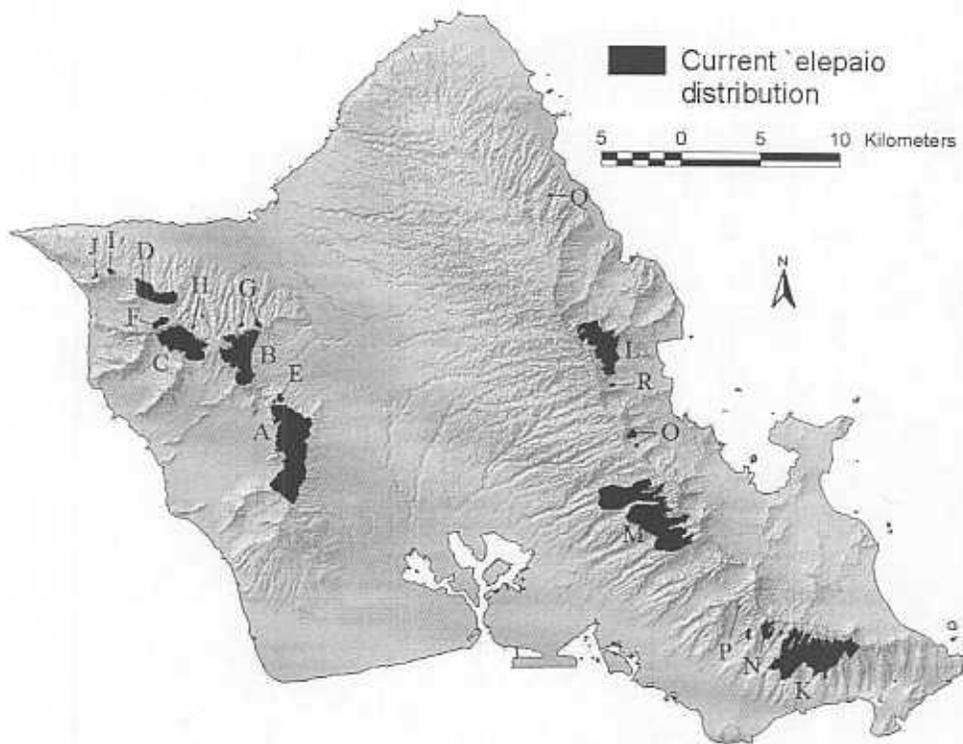


Figure 1. Current distribution of the O'ahu 'Elepaio. Subpopulations are identified by letters corresponding to those in Table 1.

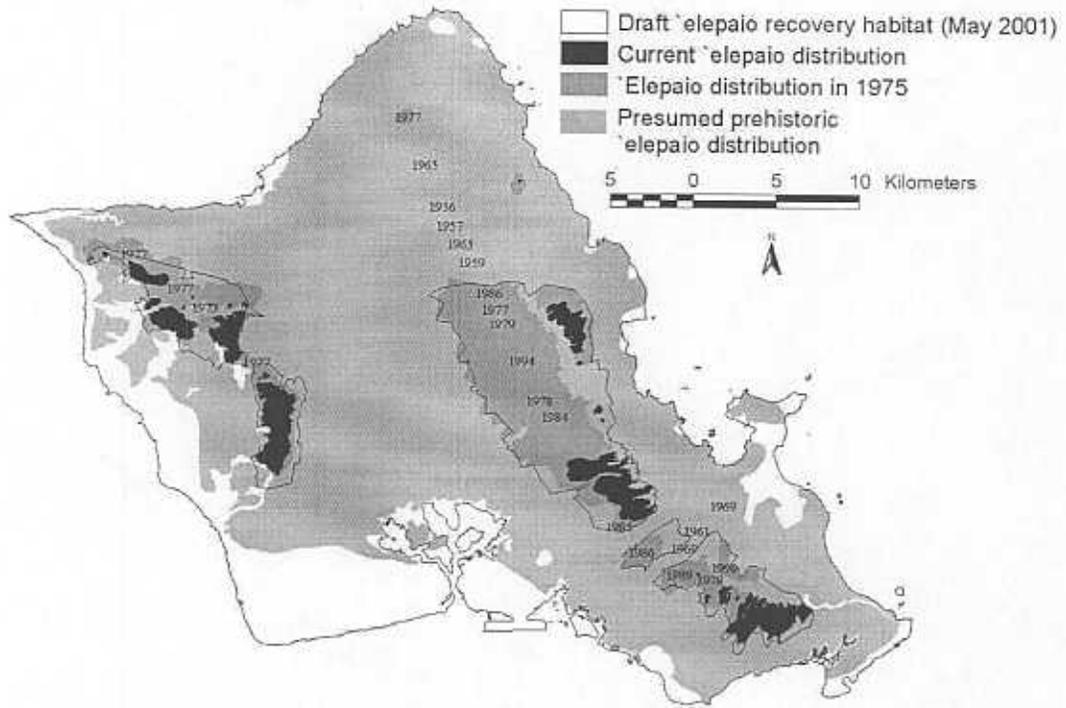


Figure 2. Current, recent historical (1975), and presumed prehistoric distributions of the O'ahu 'elepaio. Years indicate when 'elepaio were last observed in that area.

Appendix L.

Contractual Agreement for Drafting a Recovery Plan

to be inserted

Appendix M.

Memorandum of Understanding between
the Fish and Wildlife Service
and a Recovery Team

FWS No.

MEMORANDUM OF AGREEMENT
Between the
U.S. FISH AND WILDLIFE SERVICE
DEPARTMENT OF INTERIOR
and the
PRAIRIE BUSH CLOVER RECOVERY TEAM

I. Purpose

This Memorandum of Agreement between the U.S. Fish and Wildlife Service, Department of Interior, hereinafter referred to as the "Service" and the Prairie Bush Clover Recovery Team, hereinafter referred to as the "Team," is entered into under the authority of the Endangered Species Act of 1973 (16 U.S.C. 1531-1543; 87 STAT. 884), as amended.

This Agreement authorizes the expenditure of Service funds by the Team in support of the Team's planning, coordinating and implementation of species recovery efforts.

II. Scope of Work

A. The Service will:

1. Provide \$1,000 each fiscal year in support of the Team's cost of administration which includes clerical services, reproduction, envelopes, stamps, etc., and, in cases as determined by the Service, reimbursement for travel of Team members.

V. Special Provisions

Officials not to Benefit

No member or delegate to Congress or Resident Commissioner shall be admitted to any share or part of this agreement or to any benefit that may arise therefrom.

Liability

The Service will be liable for accident or injury to the extent provided under the Federal Tort Claims Act.

Funding Limitation

Funds are not available for support of the Team beyond the current fiscal year. The Service's fiscal obligation hereunder is contingent upon the yearly availability of funds as appropriated by Congress, from which payment for the purposes of this agreement can be made.

U. S. FISH AND WILDLIFE SERVICE

PRAIRIE BUSH CLOVER TEAM LEADER

Name

James C. Gritman
James C. Gritman
Acting Regional Director

Name

Willby Jones

Title

Title

Robert Munnich DNR

JUN 4 1986

Date

Date

June 9, 1986

Appendix N.

Information Quality Guidelines

NOAA Information Quality Guidelines

FWS Information Quality Guidelines

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION INFORMATION QUALITY GUIDELINES

September 30, 2002 —

PART I: BACKGROUND, MISSION, DEFINITIONS, AND SCOPE

BACKGROUND

Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Public Law 106-554), hereinafter "Section 515," directs the Office of Management and Budget (OMB) to issue government-wide guidelines (OMB Guidelines—[PDF](#) or [text](#)) that "provide policy and procedural guidance to federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by federal agencies. "OMB complied by issuing guidelines which direct each federal agency to (A) issue its own guidelines ensuring and maximizing the quality, objectivity, utility, and integrity of information disseminated by the agency; (B) establish administrative mechanisms allowing affected persons to seek and obtain correction of information that does not comply with the OMB 515 Guidelines (Federal Register: February 22, 2002, Volume 67, Number 36, pp. 8452-8460, herein "OMB Guidelines") or the agency guidelines; and (C) report periodically to the Director of OMB on the number and nature of complaints received by the agency regarding the accuracy of information disseminated by the agency and how such complaints were handled by the agency.

In compliance with OMB directives, the Department of Commerce (DOC) has issued Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Disseminated Information (available from <http://www.commerce.gov>).

This document implements Section 515 and fulfills the OMB and DOC information quality guidelines. It may be revised periodically, based on experience, evolving requirements of the National Oceanic and Atmospheric Administration (NOAA) and concerns expressed by the public. Covered information disseminated by NOAA will comply with all applicable OMB, DOC, and (these) NOAA Information Quality Guidelines.

In implementing these guidelines, NOAA acknowledges that ensuring the quality of information is an important management objective that takes its place alongside other NOAA objectives, such as ensuring the success of NOAA missions, observing budget and resource priorities and restraints, and providing useful information to the public. NOAA intends to implement these guidelines in a way that will achieve all these objectives in a harmonious way.

MISSION

NOAA's mission is to describe and predict changes in the Earth's environment, and conserve and manage wisely the Nation's coastal and marine resources to ensure sustainable economic opportunities. To accomplish this mission, NOAA:

- creates and disseminates reliable assessments and predictions of weather, climate, the space environment, and ocean and living marine resources;
- produces and assures access to nautical and geodetic products and services;
- implements integrated approaches to environmental management and ocean and

coastal resources development, protection and restoration for economic and social health, protection of essential fish habitat, maintains sustainable fisheries, and recovery of endangered and threatened species of fish and marine mammals;

- works to ensure access to sustained, reliable observations - from satellites to ships to radars to data buoys;
- develops public-private and international partnerships for the expansion and transfer of environmental knowledge and technologies; and
- invests in scientific research and the development of new technologies to improve current operations and prepare for the future.

DEFINITIONS

The definitions in this section apply throughout these Guidelines.

Quality is an encompassing term comprising utility, objectivity, and integrity. Therefore, the guidelines sometimes refer to these four statutory terms, collectively, as "quality."

Utility refers to the usefulness of the information to its intended users, including the public. In assessing the usefulness of information that the agency disseminates to the public, NOAA considers the uses of the information not only from its own perspective but also from the perspective of the public. As a result, when transparency of information is relevant for assessing the information's usefulness from the public's perspective, NOAA takes care to ensure that transparency has been addressed in its review of the information.

Objectivity consists of two distinct elements: presentation and substance. The presentation element includes whether disseminated information is presented in an accurate, clear, complete, and unbiased manner and in a proper context. The substance element involves a focus on ensuring accurate, reliable, and unbiased information. In a scientific, financial, or statistical context, the original and supporting data shall be generated, and the analytic results shall be developed, using sound statistical and research methods.

Integrity refers to security – the protection of information from unauthorized access or revision, to ensure that the information is not compromised through corruption or falsification.

Information means any communication or representation of knowledge such as facts or data, in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual forms. This definition includes information that an agency disseminates from a web page, but does not include the provision of hyperlinks to information that others disseminate. This definition does not include opinions, where the agency's presentation makes it clear that what is being offered is someone's opinion rather than fact or the agency's views.

Government information means information created, collected, processed, disseminated, or disposed of by or for the Federal Government.

Information dissemination product means any books, paper, map, machine-readable material, audiovisual production, or other documentary material, regardless of physical form or characteristic, an agency disseminates to the public. This definition includes any

electronic document, CD-ROM, or web page.

Dissemination means agency initiated or sponsored distribution of information to the public. Dissemination does not include distribution limited to: government employees or agency contractors or grantees; intra- or inter-agency use or sharing of government information; and responses to requests for agency records under the Freedom of Information Act, the Privacy Act, the Federal Advisory Committee Act or other similar law. This definition also does not include distribution limited to: correspondence with individuals or persons, press releases, archival records, public filings, subpoenas or adjudicative processes.

Agency initiated distribution of information to the public refers to information that the Agency distributes or releases which reflects, represents, or forms any part of the support of the policies of the Agency. In addition, if the Agency, as an institution, distributes or releases information prepared by an outside party in a manner that reasonably suggests that the Agency agrees with the information, this would be considered Agency initiated distribution and hence Agency dissemination because of the appearance of having the information represent Agency views. By contrast, the Agency does not "initiate" the dissemination of information when an Agency scientist or grantee or contractor publishes and communicates his or her research findings in the same manner as his or her academic colleagues, even if the Agency retains ownership or other intellectual property rights because the Federal government paid for the research.

Agency sponsored distribution of information to the public refers to situations where the Agency has directed a third party to distribute or release information, or where the Agency has the authority to review and approve the information before release. By contrast, if the Agency simply provides funding to support research, and if the researcher (not the Agency) decides whether to distribute the results and – if the results are to be released – determines the content and presentation of the distribution, then the Agency has not "sponsored" the dissemination even though it has funded the research and even if the Agency retains ownership or other intellectual property rights because the Federal government paid for the research. Note that subsequent Agency dissemination of such information would require that the information adhere to the Agency's information quality guidelines even if it was initially covered by a disclaimer.

Influential, when used in the phrase "influential scientific, financial, or statistical information," means information which is expected to have a genuinely clear and substantial impact on major public policy and private sector decisions.

Reproducibility means that the information is capable of being substantially reproduced, subject to an acceptable degree of imprecision. For information judged to have more (less) important impacts, the degree of imprecision that is tolerated is reduced (increased). With respect to analytic results, "capable of being substantially reproduced" means that independent analysis of the original or supporting data using identical methods would generate similar analytic results, subject to an acceptable degree of imprecision or error.

Transparency is not defined in the OMB Guidelines, but the Supplementary Information to the OMB Guidelines indicates (p. 8456) that "transparency" is at the heart of the reproducibility standard. The Guidelines state that "The purpose of the reproducibility standard is to cultivate a consistent agency commitment to transparency about how analytic results are generated: the specific data used, the various assumptions employed, the specific analytic methods applied, and the statistical procedures employed. If sufficient transparency is achieved on each of these matters, then an analytic result

should meet the reproducibility standard. In other words, transparency – and ultimately reproducibility – is a matter of showing how you got the results you got.

SCOPE

These guidelines cover information disseminated by NOAA on or after October 1, 2002, regardless of when the information was first disseminated, except that pre-dissemination review procedures shall apply only to information first disseminated on or after October 1, 2002.

Information Disseminated by NOAA and Covered by these Guidelines

NOAA disseminates a wide variety of information that is subject to the OMB Guidelines. This dissemination could occur through a variety of mechanisms, including analyses and assessments supporting a rulemaking. To facilitate development of information quality standards and procedures, NOAA's disseminated information is grouped into the following categories: 1) Original Data; 2) Synthesized Products; 3) Interpreted Products; 4) Hydrometeorological, Hazardous Chemical Spill, and Space Weather Warnings, Forecasts, and Advisories; 5) Natural Resource Plans; 6) Experimental Products; and 7) Corporate and General Information.

Original Data are data in their most basic useful form. These are data from individual times and locations that have not been summarized or processed to higher levels of analysis. While these data are often derived from other direct measurements (e.g. , spectral signatures from a chemical analyzer, electronic signals from current meters), they represent properties of the environment. These data can be disseminated in both real time and retrospectively. Examples of original data include buoy data, survey data (e.g. , living marine resource and hydrographic surveys), biological and chemical properties, weather observations, and satellite data.

Synthesized Products are those that have been developed through analysis of original data. This includes analysis through statistical methods; model interpolations, extrapolations, and simulations; and combinations of multiple sets of original data. While some scientific evaluation and judgment is needed, the methods of analysis are well documented and relatively routine. Examples of synthesized products include summaries of fisheries landings statistics, weather statistics, model outputs, data display through Geographical Information System techniques, and satellite-derived maps.

Interpreted Products are those that have been developed through interpretation of original data and synthesized products. In many cases, this information incorporates additional contextual and/or normative data, standards, or information that puts original data and synthesized products into larger spatial, temporal, or issue contexts. This information is subject to scientific interpretation, evaluation, and judgment. Examples of interpreted products include journal articles, scientific papers, technical reports, and production of and contributions to integrated assessments.

Hydrometeorological, Hazardous Chemical Spill, and Space Weather Warnings, Forecasts, and Advisories are time-critical interpretations of original data and synthesized products, prepared under tight time constraints and covering relatively short, discrete time periods. As such, these warnings, forecasts, and advisories represent the best possible information in given circumstances. They are subject to scientific interpretation, evaluation, and judgment. Some products in this category, such as weather forecasts, are routinely prepared. Other products, such as tornado warnings, hazardous chemical spill trajectories, and solar flare alerts, are of an urgent nature and are prepared for unique circumstances.

Natural Resource Plans are information products that are prescribed by law and have content, structure, and public review processes (where applicable) that are based upon published standards (e.g. , statutory or regulatory guidelines). These plans are a composite of several types of information (e.g. , scientific, management, stakeholder input, policy) from a variety of internal and external sources. Examples of Natural Resource Plans include fishery, protected resource, and sanctuary management plans and regulations, and natural resource restoration plans.

Experimental products are products that are experimental (in the sense that their quality has not yet been fully determined) in nature, or are products that are based in part on experimental capabilities or algorithms. Experimental products fall into two classes. They are either 1) disseminated for experimental use, evaluation or feedback, or 2) used in cases where, in the view of qualified scientists who are operating in an urgent situation in which the timely flow of vital information is crucial to human health, safety, or the environment, the danger to human health, safety, or the environment will be lessened if every tool available is used. Examples of experimental products include imagery or data from non-NOAA sources, algorithms currently being tested and evaluated, experimental climate forecasts, and satellite imagery processed with developmental algorithms for urgent needs (e.g. , wildfire detection).

Corporate or general information includes all non-scientific, non-financial, non-statistical information. Examples include program and organizational descriptions, brochures, pamphlets, education and outreach materials, newsletters, and other general descriptions of NOAA operations and capabilities.

Information Not Covered by these Guidelines

Information with distribution intended to be limited to government employees or agency contractors or grantees.

Information with distribution intended to be limited to intra- or inter-agency use or sharing of government information.

Responses to requests for agency records under the Freedom of Information Act, the Privacy Act, the Federal Advisory Committee Act or other similar law.

Information relating solely to correspondence with individuals or persons.

Press releases, fact sheets, press conferences or similar communications in any medium that announce, support the announcement or give public notice of information NOAA has disseminated elsewhere.

Archival records, including library holdings.

Archival information disseminated by NOAA before October 1, 2002, and still maintained by NOAA as archival material.

Public filings.

Responses to subpoenas or compulsory document productions.

Information limited to adjudicative processes, such as pleadings, including information developed during the conduct of any criminal or civil action or administrative enforcement action, investigation or audit against specific parties, or information distributed in documents limited to administrative action determining the rights and liabilities of specific

parties under applicable statutes and regulations.

Solicitations (e.g. , program announcements, requests for proposals).

Hyperlinks to information that others disseminate, as well as paper-based information from other sources referenced, but not approved or endorsed by NOAA.

Policy manuals and management information produced for the internal management and operations of NOAA, and not primarily intended for public dissemination.

Information presented to Congress as part of legislative or oversight processes, such as testimony of NOAA officials, and information or drafting assistance provided to Congress in connection with proposed or pending legislation, that is not simultaneously disseminated to the public. (However, information which would otherwise be covered by applicable guidelines is not exempted from compliance merely because also presented to Congress.)

Documents not authored by NOAA and not intended to represent NOAA's views, including information authored and distributed by NOAA grantees, as long as the documents are not disseminated by NOAA (see definition of "dissemination").

Research data, findings, reports and other materials published or otherwise distributed by employees or by NOAA contractors or grantees that are identified as not representing NOAA views.

Opinions where the presentation makes it clear that what is being offered is not the official view of NOAA.

PART II: INFORMATION QUALITY STANDARDS AND PRE-DISSEMINATION REVIEW

Information quality is composed of three elements — utility, integrity and objectivity. Quality will be ensured and established at levels appropriate to the nature and timeliness of the information to be disseminated. Information quality is an integral part of the pre-dissemination review of information disseminated by NOAA. Information quality is also integral to information collections conducted by NOAA, and is incorporated into the clearance process required by the Paperwork Reduction Act (PRA) to help improve the quality of information that NOAA collects and disseminates to the public. NOAA offices already are required to demonstrate in their PRA submissions to OMB the "practical utility" of a proposed collection of information that they plan to disseminate. Additionally, for all proposed collections of information that will be disseminated to the public, NOAA offices should demonstrate in their PRA clearance submissions to OMB that the proposed collection of information will result in information that will be collected, maintained, and used in a way consistent with applicable information quality guidelines.

As OMB has recognized ([OMB Guidelines](#), pp. 8452-8453), "information quality comes at a cost. "In this context, OMB directed that "agencies should weigh the costs (for example, including costs attributable to agency processing effort, respondent burden, maintenance of needed privacy, and assurances of suitable confidentiality) and the benefits of higher information quality in the development of information, and the level of quality to which the information disseminated will be held. "Therefore, in deciding the appropriate level of review and documentation for information disseminated by NOAA, the costs and benefits of using a higher quality standard or a more extensive review process will be considered. Where necessary, other compelling interests such as privacy and confidentiality

protections will be considered.

The utility and integrity standards below pertain to all categories of information disseminated by NOAA. Following the utility and integrity standards are objectivity standards for each of the specific categories of information disseminated by NOAA. It should be noted that in urgent situations that may pose an imminent threat to public health or welfare, the environment, the national economy, or homeland security, these standards may be waived temporarily.

Because most of the standards presented in this document reflect existing practice in NOAA, the present tense has been used when describing them; but regardless of tense used, a performance standard is intended.

UTILITY

Utility means that disseminated information is useful to its intended users. "Useful" means that the content of the information is helpful, beneficial, or serviceable to its intended users, or that the information supports the usefulness of other disseminated information by making it more accessible or easier to read, see, understand, obtain, or use. Where the usefulness of information will be enhanced by greater transparency, care is taken that sufficient background and detail are available, either with the disseminated information or through other means, to maximize the usefulness of the information. The level of such background and detail is commensurate with the importance of the particular information, balanced against the resources required, and is appropriate to the nature and timeliness of the information to be disseminated.

As a service organization, NOAA strives to continually improve the usefulness of its data and information products. A broad definition of NOAA's customers includes the American public, other federal agencies, state and local governments, academia, the private sector, recreational concerns, and many different national and international organizations. NOAA interacts with its customers through workshops, surveys, product reviews and other similar mechanisms to assess and improve the utility and accessibility of its products.

NOAA disseminates data products in a manner that allows them to be accessible and understandable to a broad range of users. NOAA meets the needs of its customers by disseminating information through a variety of media, which can include printed publications, diskettes or CD-ROM, the internet, and broadcast media. NOAA also utilizes standard data formats and consistent attribute naming and unit conventions to ensure that its information is accessible to a broad range of users with a variety of operating systems and data needs.

INTEGRITY

Prior to dissemination, NOAA information, independent of the specific intended distribution mechanism, is safeguarded from improper access, modification, or destruction, to a degree commensurate with the risk and magnitude of harm that could result from the loss, misuse, or unauthorized access to or modification of such information.

All electronic information disseminated by NOAA adheres to the standards set out in Appendix III, "Security of Automated Information Resources," OMB Circular A-130; the Computer Security Act; and the Government Information Systems Reform Act.

Confidentiality of data collected by NOAA is safeguarded under legislation such as the Privacy Act and Titles 13, 15, and 22 of the U.S. Code.

Additional protections are provided as appropriate by 50 CFR Part 600, Subpart E, Confidentiality of Statistics of the Magnuson-Stevens Fishery Conservation and Management Act, NOAA Administrative Order 216-100 – Protection of Confidential Fisheries Statistics.

OBJECTIVITY

Objectivity ensures that information is accurate, reliable, and unbiased, and that information products are presented in an accurate, clear, complete, and unbiased manner. In a scientific, financial, or statistical context, the original and supporting data are generated, and the analytic results are developed, using commonly accepted scientific, financial, and statistical methods.

Accuracy. Because NOAA deals largely in scientific information, that information reflects the inherent uncertainty of the scientific process. The concept of statistical variation is inseparable from every phase of the scientific process, from instrumentation to final analysis. Therefore, in assessing information for accuracy, the information is considered accurate if it is within an acceptable degree of imprecision or error appropriate to the particular kind of information at issue and otherwise meets commonly accepted scientific, financial, and statistical standards. This concept is inherent in the definition of "reproducibility" as used in the OMB Guidelines and adopted by NOAA. Therefore, original and supporting data which are within an acceptable degree of imprecision, or an analytic result which is within an acceptable degree of imprecision or error, is by definition within the agency standard and is therefore considered correct.

Influential Information. As noted in the Definitions above, influential information is that which is expected to have a genuinely clear and substantial impact on major public policy and private sector decisions. A clear and substantial impact is one that has a high probability of occurring. If it is merely arguable or a judgment call, then it would probably not be clear and substantial. The impact must be on a policy or decision that is in fact expected to occur, and there must be a link between the information and the impact that is expected to occur.

Without regard to whether the information is influential, NOAA strives for the highest level of transparency about data and methods for all categories of information in all its scientific activities, within ethical, feasibility, cost, and confidentiality constraints. This supports the development of consistently superior products and fosters better value to the public. It also facilitates the reproducibility of such information by qualified third parties.

Analysis of Risks to Human Health, Safety and the Environment. For influential information disseminated by federal agencies that constitutes assessment of risks to human health, safety or the environment, the OMB Guidelines direct the agencies to adopt or adapt as objectivity standards the principles of the Safe Drinking Water Act Amendments of 1996 (SDWA) respecting risk assessments.

Many of NOAA's environmental assessments do not constitute analysis of risks or do not lend themselves to the type of risk assessments contemplated by the SDWA principles. Some assessments of risk to humans and the environment, such as tornado or hurricane warnings, use best available science conducted in accordance with sound and objective scientific practices, but are made under exigent circumstances which do not allow for extended analysis. Some programs may be based upon existing statutory, regulatory, or other guidance that allows or requires the use of expert judgment, available data, and a mix of other qualitative and quantitative input, in order to achieve the ends of the

program at issue, but are not compatible with the precise SDWA risk assessment criteria.

There are some NOAA programs which are appropriate for application of risk assessment principles. When NOAA performs and disseminates influential risk assessments that are qualitative in nature, it will apply the following two objectivity standards, adapted from the SDWA principles:

1. To the degree that the agency action is based on science, NOAA will use (a) the best available science and supporting studies (including peer-reviewed science and supporting studies when available), conducted in accordance with sound and objective scientific practices, and (b) data collected by accepted methods or best available methods.
2. NOAA will ensure that disseminated information about risk effects is presented in a comprehensive, informative, and understandable manner.

In situations requiring influential risk assessments that are quantitative in nature, NOAA generally follows basic risk assessment principles, such as the National Academies of Science paradigm of 1983, as updated in 1994, which states that "Risk assessment is not a single process, but a systematic approach to organizing and analyzing scientific knowledge and information. "In doing so, NOAA applies risk assessment approaches, over a wide variety of hazards, using appropriate practices that are widely accepted among relevant scientific and technical communities.

When NOAA performs and disseminates influential risk assessments that are quantitative in nature, in addition to applying the two objectivity standards above, risk assessment documents made available to the public shall specify, to the extent practicable, the following information, adapted from the SDWA principles:

- Each ecosystem component, including population, addressed by any estimate of applicable risk effects;
- The expected or central estimate of risk for the specific ecosystem component, including population, affected;
- Each appropriate upper-bound and/or lower-bound estimate of risk;
- Data gaps and other significant uncertainties identified in the process of the risk assessment and the studies that would assist in reducing the uncertainties; and
- Additional studies known to the agency and not used in the risk estimate that support or fail to support the findings of the assessment and the rationale of why they were not used.

Third-party Information. Use of third-party information from both domestic and international sources, such as states, municipalities, agencies and private entities, is a common practice in NOAA. Collaboration on interjurisdictional studies and monitoring programs, incorporation of on-site observations into NOAA products, and utilization of global observation systems are just a few examples of when third-party information is used. NOAA's information quality guidelines are reality-based, i.e. , not intended to prevent use of reliable outside information or full utilization of the best scientific information available. Although third-party sources may not be directly subject to Section 515, information from such sources, when used by NOAA to develop information products or to form the basis of a decision or policy, must be of known quality and consistent with

NOAA's information quality guidelines. When such information is used, any limitations, assumptions, collection methods, or uncertainties concerning it will be taken into account and disclosed.

Confidential and proprietary data, and other supporting information which cannot be disclosed. Where confidentiality or other considerations preclude full transparency, then especially rigorous robustness checks will be applied. They may take many forms, ranging from the use of outside review panels to the use of an array of specific checks to ensure objectivity. The nature and a description of these checks will be disclosed upon request.

Objectivity Standards for Specific Information Categories

A. Original Data

Objectivity of original data is achieved by using sound quality control techniques.

Data are collected according to documented procedures or in a manner that reflects standard practices accepted by the relevant scientific and technical communities. Data collection methods, systems, instruments, training, and tools are designed to meet requirements of the target user and are validated before use. Instrumentation is calibrated using primary or secondary standards or fundamental engineering and scientific methods. NOAA's standard operating procedures (SOPs) are reviewed on a regular basis and modified as practices and procedures evolve. Deviations from current SOPs are documented and occur only if valid scientific reasons exist for such a deviation.

Original data undergo quality control prior to being used by the agency or disseminated outside of the agency. Quality control techniques can include, as appropriate:

- gross error checks for data that fall outside of physically realistic ranges (e.g. a minimum, maximum, or maximum change);
- comparisons made with other independent sources of the same measurement;
- examination of individual time series and statistical summaries;
- application of sensor drift coefficients determined by a comparison of pre- and post-deployment calibrations; and
- visual inspection of the data.

The quality control/quality assessment of NOAA data is an on-going process. A continuous effort to improve the quality of NOAA data provides for evolution and improvements in survey techniques, instrument performance and maintenance, and data processing.

NOAA strives for transparency regarding data collection procedures, level of quality, and limitations. NOAA includes metadata record descriptions and an explanation of the methods and quality controls to which original data are subjected when they are disseminated, or makes them available upon request. This additional information helps the user assess the suitability of the data for a particular task.

B. Synthesized Products

Objectivity of synthesized products is achieved using data of known quality, applying sound analytical techniques, and reviewing the products or processes used to create them before dissemination.

Data and information sources are identified or made available upon request.

NOAA uses data of known quality or from sources acceptable to the relevant scientific and technical communities in order to ensure that synthesized products are valid, credible and useful.

Synthesized products are created using methods that are either published in standard methods manuals, documented in accessible formats by the disseminating office, or generally accepted by the relevant scientific and technical communities.

NOAA reviews synthesized products or the procedures used to create them (e.g. statistical procedures, models, or other analysis tools) to ensure their validity.

- Synthesized products that are unique or not produced regularly are reviewed individually by internal and/or external experts.
- For regular production of routine syntheses, the processes for developing these products are reviewed by internal and/or external experts.

NOAA includes the methods by which synthesized products are created when they are disseminated or makes them available upon request.

C. Interpreted Products

Objectivity of interpreted products is achieved by using data of known quality or from sources acceptable to the relevant scientific and technical communities and reliable supporting products, applying sound analytical techniques, presenting the information in the proper context, and reviewing the products before dissemination.

Data and information sources are properly referenced or identified upon request.

Interpreted products are produced using methods that are documented in accessible formats by the disseminating office or generally accepted by the relevant scientific and technical communities.

NOAA puts its interpreted products in context. Additional information that demonstrates the quality and limitations of the interpreted products helps the user assess the suitability of the product for the user's application.

Interpreted products are reviewed. Since the production of interpreted products often involves expert judgment, evaluation, and interpretation, these products are reviewed by technically qualified individuals to ensure that they are valid, complete, unbiased, objective, and relevant. Peer reviews, ranging from internal peer review by staff who were not involved in the development of the product to formal, independent, external peer review, are conducted at a level commensurate with the importance of the interpreted product.

NOAA includes the methods by which interpreted products are created when they are disseminated or makes them available upon request.

D. Hydrometeorological, Hazardous Chemical Spill, and Space Weather Warnings, Forecasts, and Advisories

Objectivity of information in this category is achieved by using reliable data collection methods and sound analytical techniques and systems to ensure the highest possible level of accuracy given the time critical nature of the products. Due to time constraints, the

ability to review final products prior to dissemination is limited.

To the extent possible, NOAA uses data of known quality to provide the best possible information under tight time constraints.

Data and information sources are identified or made available upon request.

To the extent possible, information in this category is produced using methods and techniques that are documented in accessible formats by the responsible office or generally accepted by the relevant scientific and technical communities. Due to the time-critical nature of these products, individual best judgment may be introduced.

NOAA identifies and tracks performance as a mechanism for evaluating accuracy of warnings, forecasts, and advisories. Statistical analysis may be carried out for a subset of products for verification purposes.

E. Experimental Products

Experimental products are either:

- 1) disseminated for experimental use, evaluation or feedback, or
- 2) used in cases where, in the view of qualified scientists who are operating in an urgent situation in which the timely flow of vital information is crucial to human health, safety, or the environment, the danger to human health, safety, or the environment will be lessened if every tool available is used.

Objectivity of experimental products is achieved by using the best science and supporting studies available, in accordance with sound and objective scientific practices, evaluated in the relevant scientific and technical communities, and peer-reviewed where feasible.

Through an iterative process, provisional documentation of theory and methods are prepared, including the various assumptions employed, the specific analytic methods applied, the data used, and the statistical procedures employed. Results of initial tests are available where possible. The experimental products and capabilities documentation, along with any tests or evaluations, are repeatedly reviewed by the appropriate NOAA units. Such products are not moved into non-experimental categories until subjected to a full, thorough, and rigorous review.

Where experimental products are disseminated for experimental use, evaluation or feedback in the form of comment or criticism, the products are accompanied by explicit limitations on their quality or by an indicated degree of uncertainty.

Where experimental products are used by NOAA in support of other NOAA products in urgent situations where the timely flow of vital information is critical, they are used by qualified scientists in conjunction with accepted non-experimental scientific methods and tools, and taking into account all available information. Such experimental products and capabilities are used only after careful testing, evaluation, and review by NOAA experts, and then are approved for provisional use only by selected field offices or other NOAA components. This process is repeated as needed to ensure an acceptable and reliable level of quality.

F. Natural Resource Plans

Natural Resource Plans are information products that are prescribed by law and have content, structure, and public review processes (where applicable) that will be based upon published standards (e.g., statutory or regulatory guidelines).

Objectivity of Natural Resource Plans will be achieved by adhering to published standards,

using information of known quality or from sources acceptable to the relevant scientific and technical communities, presenting the information in the proper context, and reviewing the products before dissemination.

Natural Resource Plans (Plans) will be developed according to published standards. Links to the published standards for the Plans disseminated by NOAA are provided below.

Plans will be based on the best information available. Plans will be a composite of several types of information (e.g. , scientific, management, stakeholder input, policy) from a variety of internal and external sources. Plans will often be developed under legislatively-directed deadlines that constrain the ability to conduct new studies or gather additional data. Therefore, the best information available at the time will be used in the development of Plans.

Plans will be presented in an accurate, clear, complete and unbiased manner. Natural Resource Plans often rely upon scientific information, analyses and conclusions for the development of management policy. Clear distinctions will be drawn between policy choices and the supporting science upon which they are based. Supporting materials, information, data and analyses used within the Plan will be properly referenced to ensure transparency. Plans will be reviewed by technically qualified individuals to ensure that they are valid, complete, unbiased, objective, and relevant.

Review of Natural Resource Plans, ranging from internal review by staff who were not involved in the development of the product to formal, independent, external peer review, will be conducted at a level commensurate with the importance of the interpreted product and the constraints imposed by legally-enforceable deadlines.

References to Plan Guidelines

Fisheries Management Plans

Laws:

Sustainable Fisheries Act

<http://www.nmfs.noaa.gov/sfa>

Essential Fish Habitat Provisions

<http://www.nmfs.noaa.gov/habitat/habitatprotection/essentialfishhabitat6.htm>

Guidance Documents:

Operational Guidelines for Fisheries Management Plan Process

http://www.nmfs.noaa.gov/sfa/domes_fish/GUIDELINES.PDF

Essential Fish Habitat Guidelines

<http://www.nmfs.noaa.gov/habitat/habitatprotection/essentialfishhabitat9.htm>

National Standard Guidelines, 50 CFR Part 600, Subpart D.

Technical Guidance on the Use of the Precautionary Approach to Implementing National Standard 1 of the Magnuson-Stevens Fishery Conservation and Management Act, V.R. Restrepo et al. , NOAA Technical Memorandum NMFS-F/SPO-31, July 1998.

Associated Laws and Guidelines:

http://www.st.nmfs.gov/st1/econ/cia/laws_links.html

Protected Resource Plans

Laws:

Endangered Species Act

<http://endangered.fws.gov/policies/index.html#ESA>

Marine Mammal Protection Act

http://www.nmfs.noaa.gov/prot_res/laws/MMPA/MMPA.html

Guidance Documents:

<http://endangered.fws.gov/policies/index.html#ESA>

http://www.nmfs.noaa.gov/prot_res/PR3/recover_planning.html

National Marine Sanctuary Management Plans

Laws:

<http://www.sanctuaries.nos.noaa.gov/natprogram/nplegislation/nplegislation.html>

<http://www.sanctuaries.nos.noaa.gov/natprogram/npregulation/npregulation.html>

Guidance Document:

National Marine Sanctuary Management Plan handbook, Third Ed. , 16 U.S.C. §1434.

Natural Resource Damage Assessment and Restoration Plans

Laws:

<http://darp.noaa.gov/legislat.htm>

Guidance Document:

<http://www.darp.noaa.gov/publicat.htm#anchor96416>

G. Corporate and General Information

Corporate and general information disseminated by NOAA is presented in a clear, complete, and unbiased manner, and in a context that enhances usability to the intended audience. The sources of the disseminated information are identified to the extent possible, consistent with confidentiality, privacy, and security considerations and protections, and taking into account timely presentation, the medium of dissemination, and the importance of the information, balanced against the resources required and the time available.

Information disseminated by NOAA is reliable and accurate to an acceptable degree of error as determined by factors such as the importance of the information, the intended use, time sensitivity, expected degree of permanence, relation to the primary mission(s) of the disseminating office, and the context of the dissemination, balanced against the resources required and the time available. A body of information is considered to be reliable if experience shows it to be generally accurate. Accurate information, in the case of non-scientific, non-financial, non-statistical information, means information which is reasonably determined to be factually correct in the view of the disseminating office as of the time of dissemination.

Review of corporate and general information disseminated by NOAA is incorporated into the normal process of formulating the information. This review is at a level appropriate to the information, taking into account the information's importance, balanced against the resources required and the time available. Department operating units treat information quality as integral to every step of an agency's development of information, including creation, collection, maintenance, and dissemination.

Review can be accomplished in a number of ways, including but not limited to combinations of the following:

- a. Active personal review of information by supervisory and management layers,

either by reviewing each individual dissemination, or selected samples, or by any other reasonable method.

b. Use of quality check lists, charts, statistics, or other means of tracking quality, completeness, and usefulness.

c. Process design and monitoring to ensure that the process itself imposes checks on information quality.

d. Review during information preparation.

e. Use of management controls.

f. Any other method which serves to enhance the accuracy, reliability, and objectivity of the information.

.PART III. ADMINISTRATIVE CORRECTION MECHANISM

A. Overview and Definitions

1. Requests to correct information. Any affected person (see "Definitions" below) may request, where appropriate, timely correction of disseminated information that does not comply with applicable information quality guidelines. An affected person would submit a request for such action directly to:

NOAA Section 515 Officer
NOAA Executive Secretariat
Herbert C. Hoover Building – Room 5230
14th and Constitution Avenue, N.W. Washington, D.C. 20230

However, requests for correction received in compliance with the Department of Commerce guidelines and forwarded to NOAA by DOC will be considered as if submitted to the NOAA Section 515 Officer on the date received by the NOAA Executive Secretariat.

2. Appeals of denials of requests. Any person receiving an initial denial of a request to correct information may file an appeal of such denial, which must be received by the NOAA Section 515 Officer (address as in paragraph III.A.1. above) within 30 calendar days of the date of the denial of the request. The appeal must include a copy of the original request, any correspondence regarding the initial denial, and a statement of the reasons why the requester believes the initial denial was in error. No opportunity for personal appearance, oral argument, or hearing on appeal will be provided.

3. Burden of Proof. The burden of proof is on the requester to show both the necessity and type of correction sought. Information that is subjected to formal, independent, external peer review is presumed to be objective. The requestor has the burden of rebutting that presumption.

4. Definitions.

Affected person means an individual or entity that uses, benefits from, or is harmed by the disseminated information at issue.

Person means an individual, partnership, corporation, association, public or private organization, or governmental entity.

Responsible office means a sub-organization of NOAA responsible for carrying out specified substantive functions (i.e. , programs) that is designated to make the initial decision on a request for correction based on NOAA information quality standards.

Staff Office means the Office of Finance and Administration, the Office of the Under Secretary of Commerce for Oceans and Atmosphere/Administrator, the Office of Chief Information Officer and High Performance Computing and Communications, Office of Marine and Aviation Operations, or any other organizational unit in NOAA that is not contained in one of the NOAA Line Offices or in another larger Staff Office.

B. Procedures for Submission of Initial Requests for Correction

1. An initial request for correction of disseminated information must be made in writing and addressed to the NOAA Section 515 Officer (address as in paragraph III.A.1. above). The NOAA Section 515 Officer will transmit the written request to the responsible office. Any NOAA employee receiving a misdirected request should make reasonable efforts to forward the request to the NOAA Section 515 Officer, but the time for response does not commence until the NOAA Section 515 Officer receives the request. A request for correction of disseminated information will not support or extend any other legally prescribed deadline for a pending action.

2. No initial request for correction will be considered under these procedures concerning:

- a. a matter not involving "information," as that term is defined herein;
- b. information that has not actually been "disseminated," according to the definition of "dissemination" herein; or
- c. disseminated information the correction of which would serve no useful purpose. For example, correction of disseminated information would serve no useful purpose with respect to information that is not valid, used, or useful after a stated short period of time (such as a weather forecast). However, this would not preclude a request for correction alleging a recurring or systemic problem resulting in repeated similar or consistent errors.

Additionally, requests that are duplicative, repetitious, or frivolous may be rejected.

Any request rejected under this provision will nevertheless be accounted for in the Department's report to OMB.

3. At a minimum, to be considered proper, initial requests must include:

- a. the requester's name, current home or business address, and telephone number or electronic mail address (to assist with timely communication);
- b. a statement that the request for correction of information is submitted under Section 515 of Public Law 106-554 (to ensure correct and timely routing);
- c. an accurate citation to or description of the particular information disseminated which is the subject of the request, including: the date and source from which the requester obtained the information; the point and form of dissemination; an indication of which NOAA office or program disseminated the information (if known); and any other details that will assist NOAA in identifying the specific information which is the subject of the request and locating the responsible office;
- d. an explanation of how the requester is affected; and

e. a specific statement of how the information at issue fails to comply with applicable guidelines and why the requester believes that the information is not correct.

4. For any proper request (i.e. one including all the elements of paragraph III.B.3.) above, NOAA will attempt to communicate either a decision on the request, or a statement of the status of the request and an estimated decision date, within 60 calendar days after receipt of the request by the NOAA Section 515 Officer.

5. No action will be taken regarding a request not including all the elements of paragraph III.B.3. (including a request made by a person unaffected by the dissemination of the information), or a request that does not state a claim according to paragraph III.C.1. The submitter of any such request will be notified, usually within 60 calendar days, of this disposition, and, if possible, may amend the request as required and resubmit it. Whether resubmitted or not, such requests will be accounted for in the Department's annual report to OMB.

6. A proper request received concerning information disseminated as part of and during the pendency of the public comment period on a proposed rule, Natural Resource Plan ("plan"), or other action, including a request concerning the information forming the record of decision for such proposed rule, plan, or action, will be treated as a comment filed on that proposed rulemaking, plan, or action, and will be addressed in issuance of any final rule, plan, or action.

C. Action by the Responsible Office on Initial Requests for Correction

1. Upon receipt of a proper request, the head of the responsible office will make a preliminary determination whether the request states a claim. A request for correction states a claim if it reasonably demonstrates, on the strength of the assertions made in the request alone, and assuming they are true and correct, that the information disseminated was based on a misapplication or non-application of NOAA's applicable published information quality standards. In other words, to state a claim, a request for correction must actually allege that NOAA disseminated information that does not comply with applicable guidelines.

A determination that a request does not state a claim will be communicated, along with an explanation of the deficiencies, to the requester, usually within 60 calendar days of receipt. The request may be amended and resubmitted as indicated in paragraph III.B.5 above.

2. If a proper request is preliminarily determined to state a claim, the head of the responsible office will objectively investigate and analyze relevant material, in a manner consistent with established internal procedures, to determine whether the disseminated information complies with NOAA's information quality standards. The head of the responsible office will make an initial decision whether the information should be corrected and what, if any, corrective action should be taken. No opportunity for personal appearance, oral argument, or hearing is provided.

If NOAA determines that corrective action is appropriate, corrective measures may be taken through a number of forms, including but not limited to: personal contacts via letter or telephone, form letters, press releases or postings on the appropriate NOAA Web site to correct a widely disseminated error or to address a frequently raised request, or withdrawal of the information in question. The form of corrective action will be determined by the nature and timeliness of the information involved and such factors as the

significance of the error on the use of the information, and the magnitude of the error.

3. The head of the responsible office will communicate his/her initial decision or the status of the request to the requester, usually within 60 calendar days after it is received by the NOAA Section 515 Officer.

4. The initial decision or status update will contain the name and title of the person communicating the decision, the name of the NOAA Line or Staff Office of which the responsible office is a part, the name and title of the head of that Line or Staff Office, and a notice that the requester may appeal an initial denial, as in paragraph III.D.1. below, within 30 calendar days of the date of the initial denial.

Normally, the person handling the appeal (Appeal Official) will be the head of the Line or Staff Office of which the responsible office is a part. To ensure objectivity, any such Appeal Official will be at least one administrative level above the official who made the initial decision. If this is not possible within the NOAA Line or Staff Office of which the responsible office is a part, then the Appeal Official will be an official from another office which is at least one administrative level above the office of the official who made the initial decision. An initial denial will become a final decision if no appeal is filed within 30 calendar days.

D. Appeals from Initial Denial

1. An appeal from an initial denial must be made within 30 calendar days of the date of the initial decision and must be in writing and addressed to the NOAA Section 515 Officer (address as in paragraph III.A.1. above). An appeal of an initial denial must include:

- a. the requester's name, current home or business address, and telephone number or electronic mail address (in order to ensure timely communication);
- b. a copy of the original request and any correspondence regarding the initial denial; and
- c. a statement of the reasons why the requester believes the initial denial was in error.

2. Where an initial denial has been made concerning information that is part of the record of decision of a rulemaking, Natural Resource Plan, or other action identified in paragraph III.B.6., and an administrative appeal mechanism, such as a reconsideration process, exists, an appeal will be considered pursuant to that process.

3. The Appeal Official will decide whether the information should be corrected based on all the information presented in the appeal record. No opportunity for personal appearance, oral argument, or hearing on appeal is provided. The Appeal Official will communicate his/her decision to the requester usually within 60 calendar days after receipt by the NOAA Section 515 Officer.

U.S. Fish and Wildlife Service Information Quality Guidelines

Guidelines issued by the U.S. Fish and Wildlife Service (FWS) for ensuring and maximizing the quality, objectivity, utility, and integrity of information disseminated by FWS.

PART I INTRODUCTION AND PURPOSE

PART II BACKGROUND, TERMINOLOGY, AND APPLICABILITY

PART III INFORMATION QUALITY STANDARDS

PART IV INFORMATION QUALITY PROCEDURES

PART V LEGAL EFFECT

PART VI DEFINITIONS

PART I INTRODUCTION AND PURPOSE

The mission of the U.S. Fish and Wildlife Service (FWS) is working with others to conserve, protect, and enhance fish, wildlife and plants and their habitats for the continuing benefit of the American people. FWS is issuing these guidelines to establish FWS policy and procedures for reviewing, substantiating, and correcting the quality of information it disseminates, so that persons affected by distribution of information by FWS may seek and obtain, where appropriate, correction of information that they believe may be in error or otherwise not in compliance with the law.

PART II BACKGROUND, TERMINOLOGY, AND APPLICABILITY

In December 2000, Congress required Federal Agencies to publish their own guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information that they disseminate to the public (44 U.S.C. 3502). The amended language is included in section 515(a) of the Treasury and General Government Appropriations Act of 2001 (P.L. 106-554, HR 5658.) The Office of Management and Budget (OMB) published guidelines in the Federal Register on February 22, 2002 (67 FR 8452), directing agencies to address the requirements of the law. The Department of the Interior announced adoption of the OMB guidance. In a May 2002 Federal Register notice, the Department of the Interior instructed bureaus to prepare separate guidelines on how they would apply the Act. This document provides guidance within the FWS and informs the public of FWS policies and procedures to conform with these requirements.

The guidelines supplement existing procedures for commenting on information or correcting information. The guidelines may be revised periodically to best address, ensure, and maximize information quality.

Factors such as homeland security, threats to public health, statutory or court-ordered deadlines, circumstances beyond our control, or other time constraints may limit or preclude applicability of these guidelines.

II-1 To whom do these guidelines apply?

These guidelines apply to all Service offices that disseminate information to the public.

II-2 When do these guidelines become effective?

These guidelines apply to information disseminated on or after October 1, 2002, regardless of when it was first disseminated. Archived records of information disseminated and subsequently archived are exempt from the Guidelines. Information disseminated prior to October 1, 2002, but not archived and still being used in a decision-making process is not exempt from these guidelines.

II-3 Do these guidelines change requirements of the public?

These guidelines do not impose new requirements or obligations on the public.

II-4 What do these guidelines cover?

These guidelines apply to all information disseminated by the agency to the public, including information initiated or sponsored by the agency, and information from outside parties that is disseminated by the agency in a manner that reasonably suggests that the agency endorses or agrees with the information. For the purpose of these guidelines, "information" includes any communication or representation of knowledge such as facts or data, in any medium or form. "Disseminated to the public" includes publication (electronic or written) to a community or audience. "Sponsored information" is information FWS initiates or sponsors for distribution to the public. As examples: FWS sponsors information disseminated to the public when FWS prepares and distributes information to support or represent the FWS's viewpoint, to formulate or support an FWS regulation, to distribute FWS guidance, or otherwise put forth a bureau decision or position. FWS sponsors information when information prepared or submitted by a third party is distributed by FWS in a manner that reasonably suggests that FWS endorses or agrees with it, or is using it to support the FWS's viewpoint.

II-5 Where are the terms in this guidance further defined?

The terms "quality, utility, objectivity, integrity, information, government information, information dissemination product, dissemination, influential, and reproducibility" are defined in Part VI. Where a different or modified definition of any of these terms is applicable in a specific context, or associated with a specific information category, that definition will be provided in the context to which it applies.

II-6 What information does not fall under these guidelines?

These guidelines apply only to information that FWS sponsors and disseminates to the public. Examples of information that would generally not meet these criteria are:

- Testimony and information presented to Congress as part of legislative or oversight processes,

including drafting assistance in connection with proposed or pending legislation, that is not simultaneously disseminated to the public;

- Internet hyperlinks to non-FWS sites;
- Opinions (where FWS presentation makes it clear that what is being offered is someone's opinion rather than fact or the views of FWS) are not FWS positions;
- Correspondence to and from an individual and FWS concerning the status of the individual's particular issue, permit, land or case is not considered information disseminated to the public;
- Archival records, including library holdings;
- Information distributed only to government employees or FWS contractors or grantees;
- Communications between Federal agencies, including management, personnel and organizational information, even if the information becomes public at some point;
- FWS responses to requests for agency records pursuant to the Freedom of Information Act (FOIA), the Privacy Act, the Federal Advisory Committee Act (FACA), or other similar laws;
- Solicitations (e.g., program announcements, requests for proposals);
- Press releases, fact sheets, press conferences or similar communications in any medium that announce, support the announcement or give public notice of information FWS has disseminated elsewhere;
- Distributions of information by outside parties unless FWS is using the outside party to disseminate the information on its behalf (and to clarify applicability of the guidelines, FWS will indicate whether distributions are initiated or sponsored by FWS by using disclaimers to explain the status of the information);
- Research by Federal employees and recipients of FWS grants, cooperative agreements, or contracts, where the researcher (and not FWS) decides whether and how to communicate and publish the research, does so in the same manner as his or her academic colleagues, and distributes the research in a manner that indicates that the research does not represent FWS's official position (for example, by including an appropriate disclaimer). Distribution of research in this manner is not subject to these guidelines even if FWS retains ownership or other intellectual property rights because the Federal Government paid for the research;
- Public filings including information submitted by applicants for a permit, license, approval, authorization, grant, or other benefit or permission; information submitted voluntarily as part of public comment during rulemaking;
- Dissemination intended to be limited to subpoenas or information for adjudicative processes, including ongoing criminal or civil action or administrative enforcement action, investigation, or audit;
- Forensic reports issued in connection with ongoing criminal investigations.

II-7 What happens if information is initially not covered by these guidelines, but FWS subsequently disseminates it to the public?

If a particular distribution of information is not covered by these guidelines, the guidelines may still apply to a subsequent distribution of the information in which FWS adopts, endorses or uses the information to formulate or support a regulation, guidance, or other decision or position.

II-8 How does FWS ensure the objectivity of information that is covered by these guidelines?

FWS strives for objectivity of information subject to these guidelines by presenting the information in an accurate, clear, complete, and unbiased manner. FWS is committed to ensure accurate, reliable, and unbiased information. All information disseminated to the public must be approved prior to its dissemination by an authorized representative of the appropriate program and/or Regional Office and must satisfy OMB, Departmental, and FWS guidelines. The approval process will include documentation of the specific information quality standards used in producing the information in a way that substantiates the quality, utility, objectivity, and integrity of the information in a manner that conforms to OMB and Departmental guidelines.

II-9 How does FWS ensure the objectivity and integrity of information that is covered by these guidelines?

Information is subject to security controls designed to ensure that it cannot be compromised or contaminated. These include quality review/quality control procedures, laboratory protocols, study protocols, peer review, and senior management oversight.

II-10 Who is the official responsible for FWS compliance with the guidelines?

The Assistant Director for External Affairs is the responsible official.

PART III INFORMATION QUALITY STANDARDS

To the greatest extent practicable and appropriate, information that FWS disseminates is internally reviewed for quality, including objectivity, utility and integrity, before such information is disseminated. FWS adopts as performance standards, the basic guidance (and definitions) published by OMB on February 22, 2002, and adopted by DOI in a Federal Register notice published May 24, 2002, and the DOI Final Notice.

III-1 How does FWS ensure and maximize the quality of disseminated information?

FWS ensures and maximizes the quality of information by using policies and procedures appropriate to the information product. These include senior management oversight and controls, peer review, communications, product review, surnaming, and error correction. Higher levels of scrutiny are applied to influential scientific, financial or statistical information, which must adhere to a higher standard of quality.

III-2 How does FWS define influential information for these guidelines?

"Influential" means scientific, financial or statistical information with a clear and substantial impact on important public policies or important private sector decisions. For example, FWS will generally consider the following classes of information to be influential: information disseminated in support of the Director's decisions or actions (e.g., rules, substantive notices, policy documents, studies, guidance), and issues that are highly controversial or have cross-agency interest or affect cross-agency policies.

III-3 How does FWS ensure and maximize the quality of "influential" information?

Offices that disseminate information to the public must ensure that influential information, such as analytic results, have a high degree of transparency regarding the source of the information, assumptions employed, analytical methods applied, and statistical procedures employed. Original and supporting information may not be subject to the high and specific degree of transparency required of analytic results, but FWS will apply relevant policies and procedures to achieve reproducibility to the extent practicable, given ethical,

feasibility, and confidentiality constraints. Peer review and public comment periods are key tools for ensuring information quality.

III-4 What is the context in which the information deemed “influential” will be changed?

FWS uses the best available information in making its decisions, from materials from stakeholders, the public, and the scientific community. The most recent or thorough information will be utilized where available. FWS will rely on older information where the conditions of the land and/or resources have not substantially changed over time or where collection of more recent information would not be justified by cost or anticipated yield and value.

III-5 Does FWS ensure and maximize the quality of information from external sources?

FWS will take steps to ensure that the quality and transparency of information provided by external sources, e.g., State and local governments, are sufficient for the intended use. Further consultation, cooperation and communication with States and other governments, the scientific and technical community and other external information providers are needed to address application of these guidelines to external sources.

PART IV INFORMATION QUALITY PROCEDURES

Each FWS office will incorporate the information quality principles outlined in these guidelines into existing review procedures as appropriate. Offices and Regions may develop unique and new procedures, as needed, to provide additional assurance that the information disseminated by or on behalf of their organizations is consistent with these guidelines. All FWS information (publications, reports, data, web pages, etc) must contain a contact name/office, address/email address, phone number.

The FWS website (www.fws.gov) will provide the primary means for affected persons to challenge the quality of disseminated information.

Affected persons may also file a complaint with FWS by mail at:

Correspondence Control Unit
Attention: Information Quality Complaint Processing
U.S. Fish and Wildlife Service
1849 C Street, NW, Mail Stop 3238-MIB
Washington, D.C. 20240

IV-1 Who may request a correction of information?

Any affected person or organization may request a correction of information from FWS pursuant to these guidelines. "Affected persons or organizations" are those who may use, be benefitted by, or be harmed by the disseminated information.

IV-2 What should be included in a request for correction of information?

A request for correction of information must include the following:

- Statement that the Request for Correction of Information is Submitted Under DOI/FWS Information Quality Guidelines.
- Requester Contact Information. The name, mailing address, telephone number, fax number, email address, and organizational affiliation (if any). Organizations submitting a request must identify an individual to serve as a contact.
- Description of Information to Correct. The name of the FWS publication, report, or data product; the date of issuance or other identifying information, such as the URL of the web page, and a detailed description that clearly identifies the specific information contained in that publication, report, or data production for which a correction is being sought.
- Explanation of Noncompliance with OMB, DOI, and/or FWS Information Quality Guidelines.
- Effect of the Alleged Error. Provide an explanation that describes how the alleged error harms or how a correction would benefit the requestor.
- Recommendation and justification for how the information should be corrected. State specifically how the information should be corrected and explain why the corrections should be made.
- Supporting Documentary Evidence. Provide any supporting documentary evidence, such as comparable data or research results on the same topic.

IV-3 Will FWS consider all requests for correction of information?

Yes. FWS will consider all requests submitted pursuant to these guidelines, and consider it for correction unless the request itself is deemed "frivolous," including those made in bad faith or without justification, deemed inconsequential or trivial, and for which a response would be duplicative of existing processes, unnecessary, or unduly burdensome on the Agency.

IV-4 What type of requests would be considered frivolous, duplicative, unnecessary, or unduly burdensome?

FWS may consider a request for correction (or complaint) frivolous if it could have been submitted as a timely comment in the rulemaking or other action but was submitted after the comment period. FWS may consider a request for correction frivolous if it is not from an "affected person" and for these guidelines "affected persons" are persons or organizations who may use, be benefitted by, or be harmed by the disseminated information, including persons who are seeking to address information about themselves as well as persons who use information. FWS may consider each complaint on its merit. Complaints may be dismissed by FWS if it is determined that the complaint is duplicative, burdensome, and disruptive if it was already subject to a separate process for information with a public comment process. For example, FWS rulemaking includes a comprehensive public comment process and imposes a legal obligation on FWS to respond to comments on all aspects of the action. These procedural safeguards can ensure a thorough response to comments on quality of information. The thorough consideration required by this process generally meets the needs of the request for correction of information process.

In the case of rulemakings and other public comment procedures, where FWS disseminates a study analysis, or other information prior to the final FWS action or information product, requests for correction will be considered prior to the final FWS action or information dissemination in those cases where FWS has determined that an earlier response would not unduly delay issuance of FWS action or information and the complainant has shown a reasonable likelihood of suffering actual harm from the agency's dissemination

if the FWS does not resolve the complaint prior to the final FWS action or information product.

If FWS cannot respond to a complaint in the response to comments for the action (for example, because the complaint is submitted too late to be considered along with other comments or because the complaint is not germane to the action), FWS at its discretion will consider whether a separate response to the complaint is appropriate.

IV-5 How will FWS respond to a request for correction of information?

All complaints about Service information quality standards will be tracked by the Service's Correspondence Control Unit (CCU), which will route complaints to the Program or Regional Office responsible for the information. CCU will notify the complainant of receipt of the complaint within 10 business days.

If a request for correction of information is appropriate for consideration, FWS will review the request within 45 business days from receipt of the complaint and issue a decision. FWS will send the results of this decision to the requester with an explanation for the decision. If the request requires more than 45 working days to resolve, the agency will inform the complainant that more time is required and indicate the reason why. If a request is approved, FWS will take corrective action. Corrective measures may include personal contacts via letter, form letters, press releases or postings on the FWS website to correct a widely disseminated error or address a frequently raised request. Corrective measures, where appropriate, will be designed to provide notice to affected persons of any corrections made.

IV-6 Will FWS reconsider its decision on a request for the correction of information?

Requesters of corrective actions who are dissatisfied with an FWS decision regarding their request may appeal the decision. Appeals for reconsideration must be submitted within 15 business days from the decision and should contain the following:

- Indication that the person is seeking an appeal of an FWS decision on a previously submitted request for a correction of information, including the date of the original submission and date of FWS decision;
- Indication of how the individual or organization is an "affected person" under the provisions of these guidelines;
- Name and contact information. Organizations submitting an appeal should identify an individual as a contact;
- Explanation of the disagreement with the FWS decision and, if possible, a recommendation of corrective action; and
- A copy of the original request for the correction of information.

IV-7 How does FWS process requests for reconsideration of FWS decisions?

Requests for reconsideration of FWS decisions will be logged and tracked by the FWS's Correspondence Control Unit. Appeals will be forwarded to the appropriate FWS program office or Region that has responsibility for the information in question. The Director of the Fish and Wildlife Service or his designated responsible Assistant or Regional Director will make the final decision on the appeal within 15 business days from receipt in FWS.

IV-8 What is the reporting requirement for oversight of these guidelines?

The Assistant Director for External Affairs will submit reports to the Department of the Interior for consolidated submission to OMB on an annual basis beginning January 1, 2004, and the report will include the number, nature and resolution of complaints received by FWS under the provisions of these guidelines.

PART V LEGAL EFFECT

These guidelines are intended only to improve the internal management of FWS relating to information quality. Nothing in these guidelines is intended to create any right or benefit, substantive or procedural, enforceable by law or equity by a party against the United States, its agencies, its offices, or another person. These guidelines do not provide any right to judicial review.

PART VI DEFINITIONS

VI-1. *Quality* is an encompassing term that includes utility, objectivity, and integrity. Therefore, the guidelines sometimes refer to these four statutory terms collectively as *quality*.

VI-2. *Utility* refers to the usefulness of the information to its intended users, including the public. In assessing the usefulness of information that we disseminate to the public, we need to reconsider the uses of the information not only from our perspective, but also from the perspective of the public. As a result, when transparency of information is relevant for assessing the information's usefulness from the public's perspective, we will take care to address that transparency in our review of the information.

VI-3. *Objectivity* involves two distinct elements: presentations and substance.

(a) *Objectivity* includes whether we disseminate information in an accurate, clear, complete, and unbiased manner. This involves whether the information is presented within a proper context. Sometimes, in disseminating certain types of information to the public, other information must also be disseminated in order to ensure an accurate, clear, complete, and unbiased presentation. Also, we will identify the sources of the disseminated information (to the extent possible, consistent with confidentiality protections) and include it in a specific financial, or statistical context so that the public can assess for itself whether there may be some reason to question the objectivity of the sources. Where appropriate, we will identify transparent documentation and error sources affecting data quality.

(b) In addition, objectivity involves a focus on ensuring accurate, reliable, and unbiased information. In a scientific, financial, or statistical context, we will analyze the original and supporting data and develop our results using sound statistical and research methods.

(1) If data and analytic results have been subjected to formal, independent, external peer review, we will generally presume that the information is of acceptable objectivity. However, a complainant may rebut this presumption based on a persuasive showing in a particular instance. If we use peer review to help satisfy the objectivity standard, the review process employed must meet the general criteria for competent and credible peer

review recommended by OMB's Office of Information and Regulatory Affairs (OIRA) to the President's Management Council (9/20/01) (http://www.whitehouse.gov/omb/inforeg/oira_review-process.html). OIRA recommends "that (a) peer reviewers be selected primarily on the basis of necessary technical expertise, (b) peer reviewers be expected to disclose to agencies prior technical/policy positions they may have taken on the issues at hand, (c) peer reviewers be expected to disclose to agencies their sources of personal and institutional funding (private or public sector), and (d) peer reviews be conducted in an open and rigorous manner."

(2) Since we are responsible for disseminating influential scientific, financial, and statistical information, we will include a high degree of transparency about data and methods to facilitate the reproducibility (the ability to reproduce the results) of such information by qualified third parties. To be considered influential, information must be based on objective and quantifiable data and constitute a principal basis for substantive policy positions adopted by FWS. It should also be noted that the definition applies to "information" itself, not to decisions that the information may support. Even if a decision or action by FWS is itself very important, a particular piece of information supporting it may or may not be "influential".

Original and supporting data will be subject to commonly accepted scientific, financial, or statistical standards. We will not require that all disseminated data be subjected to a reproducibility requirement. We may identify, in consultation with the relevant scientific and technical communities, those particular types of data that can practically be subjected to a reproducibility requirement, given ethical, feasibility, or confidentiality constraints. It is understood that reproducibility of data is an indication of transparency about research design and methods and thus a replication exercise (i.e. a new experiment, test of sample) that will not be required prior to each release of information.

With regard to analytical results, we will generally require sufficient transparency about data and methods that a qualified member of the public could undertake an independent reanalysis. These transparency standards apply to our analysis of data from a single study as well as to analyses that combine information from multiple studies.

Making the data and methods publicly available will assist us in determining whether

analytic results are reproducible. However, the objectivity standard does not override other compelling interests such as privacy, trade secrets, intellectual property, and other confidentiality protections.

In situations where public access to data and methods will not occur due to other compelling interests, we will apply especially rigorous checks to analytical results and documents what checks were undertaken. We will, however, disclose the specific data sources used, and the specific quantitative methods and assumptions we employed. We will define the type of checks, and the level of detail for documentation, given the nature and complexity of the issues. With regard to analysis of risks, human health, safety, and the environment, we will use or adapt the quality principles applied by Congress to risk information used and disseminated under the Safe Drinking Water Amendments of 1996 (42 U.S.C. 300g-1(b)(3)(A) & B)).

VI-4. *Integrity* refers to the security of information - protection of the information from unauthorized access or revision, to ensure that the information is not compromised through corruption or falsification.

VI-5. *Information* means any communication or representation of knowledge such as facts or data, in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual forms. This definition includes information that an agency disseminates from a web page, but does not include the provision of hyperlinks to information that others disseminate. This definition does not include opinions, where our presentation makes it clear that what is being offered is someone's opinion rather than fact or the agency's views.

VI-6. *Government information* means information created, collected, processed, disseminated, or disposed of by or for the Federal Government.

VI-7. *Information dissemination product* means any books, paper, map, machine-readable material, audiovisual production, or other documentary material, regardless of physical form or characteristic, an agency disseminates to the public. This definition includes any electronic document, CD-ROM, or web page.

VI-8. *Dissemination* means agency initiated or sponsored distribution of information to the public [see 5 CFR 1320.3(d) for definition of "conduct or sponsor"]. Dissemination does not include distribution limited to government employees or agency contractors or grantees; intra- or inter-agency use or sharing of government information; and responses to requests for agency records under the Freedom of Information Act, the Privacy Act, the Federal Advisory Committee Act or other similar law. This definition also does not include distribution limited to correspondence with individuals or persons, press releases, archival records, public filings, subpoenas or adjudicative processes.

VI-9. *Influential*, when used in the phrase "influential scientific, financial, or statistical information," means that we can reasonably determine that dissemination of the information will have or does have a clear and

substantial impact on important private sector decisions. We are authorized to define "influential" in ways appropriate for us, given the nature and multiplicity of issues for which we are responsible.

VI-10. *Reproducible* means that the information is capable of being substantially reproduced, subject to an acceptable degree of imprecision. For information judged to have more (less) important impacts, the degree of imprecision that is tolerated is reduced (increased). If we apply the reproducibility test to specific types of original or supporting data, the associated guidelines will provide relevant definitions of reproducibility (e.g. standards for replication of laboratory data). With respect to analytic results, capable of being substantially reproduced means that independent analysis of the original or supporting data using identical methods would demonstrate whether similar analytic results, subject to an acceptable degree of imprecision or error, could be generated.

Appendix O.

FWS National Outreach Strategy



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Washington, D.C. 20240

In Reply Refer To:
FWS/PA

AUG - 8 1997

Memorandum

To: Service Employees

From:

Director

Subject: National Outreach Strategy

Communication is essential to the Fish and Wildlife Service's resource mission. Good communication builds understanding and helps the public make informed decisions about the future of fish and wildlife resources.

Over the past several years, it became clear to the Directorate that a sharper focus is needed for the Service's "outreach" efforts. This decision arose out of a growing awareness that the Service expends significant resources on "outreach," but that we are not presenting the public with a unified understanding of the U.S. Fish and Wildlife Service's conservation mission.

To strengthen and focus the Service's communication efforts, the Directorate has approved the National Outreach Strategy. The Strategy offers guidance to help clarify and unify our message and to make sure we are talking -- and listening -- to the audiences who will have the greatest influence on the future of fish and wildlife resources. It also provides specific guidance to help you prepare outreach plans now required for endangered species listings and all other significant Service actions.

The goals of the National Outreach Strategy are simple: to ensure that we are building relationships with partners and decisionmakers; to provide timely, accurate information about our decisions to concerned citizens; and to provide clear messages about how fish and wildlife conservation affects the quality of life for all Americans. The Strategy is also aimed at ensuring that we all communicate about the U.S. Fish and Wildlife Service when we conduct "outreach" for our individual programs and field stations.

By implementing the National Outreach Strategy, we will make more effective use of the time and money we devote to communication. Ultimately, the relationships we build and the public understanding we gain will help ensure a more secure future for America's fish and wildlife resources.

I hope each of you will read this document and begin to apply it in your daily work. The Service Directorate will continue to take the actions required to implement the National Outreach Strategy.

Executive Summary

This report describes a national communications strategy for the U.S. Fish and Wildlife Service.

A more unified, strategic communications program will help the Service accomplish its conservation mission for fish and wildlife. This strategy recommends actions that will make communications an integral part of our natural resource management program.

The Service needs to *focus its message* so that the agency speaks with one voice across the country. Employees can then build upon each other's communications efforts. The strategy recommends three basic messages that can be used to explain why the Service's work is important to the American people.

For any communications program to work, the Service must be perceived as a *credible source* of information, and its employees must be trusted as dedicated professionals who are *responsive to the public*. Building and maintaining this public trust should be an integral part of the Service's outreach program.

To achieve this, the strategy recommends that Service outreach efforts focus on building *strong relationships with key audiences at the local, regional, and national level*. It recommends that the Service prepare and carry out *outreach plans* for major decisions and announcements to make sure that the agency's message is clear and that concerned people are notified in a timely way.

The strategy recommends that the Service strengthen its communications program by building a stronger corps of *communications professionals* at key locations. It also recommends establishing a position for a National Outreach Coordinator at the Washington Office level to focus on building new partnerships and a more integrated Service outreach effort.

The strategy recommends that the Service continue its effort to strengthen its "corporate identity" by implementing the *uniform design standards* for publications and reviewing standards for uniforms and vehicles. It recommends *reviewing existing publications, audiovisuals, and exhibits* to determine the need for new or updated materials that can be used Servicewide. It also recommends making *better use of special events* to support specific messages, and using environmental education programs to support Service outreach goals.

Introduction: Using Communications to Carry Out Our Mission

As we approach the 21st century, the future of America's fish and wildlife is at a crossroads. Wildlife habitat continues to vanish in the face of development pressure, while our growing urban population has less direct connection with fish and wildlife than any previous generation. The public often responds emotionally to wildlife management and conservation issues. Professional fish and wildlife managers face new challenges that demand new approaches to the way we do business.

The U.S. Fish and Wildlife Service is America's voice for wildlife. It is our job to speak up for the wild creatures that cannot speak for themselves. To be effective, we must do so in a way that engenders public understanding and support.

Although the Service must manage many controversial issues, it also enjoys significant strengths: a dedicated workforce, and strong public interest in fish and wildlife.

To meet Service challenges and take advantage of its strengths, this plan recommends a more unified and strategic communications program that will help the Service carry out its resource conservation mission.

A great deal of effective and valuable outreach is already occurring within the U.S. Fish and Wildlife Service. Many employees are already implementing the actions recommended in this plan.

There are still many instances, however, when communications needs are not "built in" to planning for Service resource decisions.

In the past the Service has not devoted enough resources to communications to match the ability of our activities to generate controversy. And because the Service has such diverse responsibilities, existing outreach resources have been spread thin. Most outreach efforts have been conducted on an ad hoc basis to meet the needs of individual field stations, regions, or programs. While this has resulted in favorable results in some individual instances, its overall effect has been a "scattershot" approach to communications.

Former Director Mollie Beattie noted that this diversified, decentralized approach to outreach was not meeting critical Servicewide information needs during 1990's, and was unlikely to serve the agency or the public well in the 21st century.

"It's not a question of whether we're doing things right," she said, "but whether we are doing the right things."

Individual regions, field stations, and programs do have specific communication needs. The National Outreach Strategy is not intended to supplant these efforts, nor can any central strategy dictate the details of all regional, field, or program communication efforts.

Rather, the National Outreach Strategy is intended to provide guidance and focus for Service communication efforts. Its goal is to make sure we make the most effective use of our time and resources by focusing our message into something people can easily understand, and making sure we deliver that message to concerned people in a timely way.

The success of the National Outreach Strategy will depend on an effective *internal* communication program so that employees will understand and be able to carry out the plan. This internal component must include providing employees with factual information about Service policy and activities on major issues, so that even those who are not directly involved will be informed enough to explain issues to the public.

Goal

The goal of the National Outreach Strategy is to help U.S. Fish and Wildlife Service employees communicate more effectively, in order to improve the agency's ability to carry out its fish and wildlife conservation mission.

Through the National Outreach Strategy, the Service will:

- Define clear, consistent messages;
- Improve the consistency and timeliness of the information the Service provides to decisionmakers, community leaders, and the public;
- Improve relationships with key audiences and recognize the importance of the public as a participant in natural resource management;
- Unify employees to work toward common goals, while respecting the diversity of their responsibilities;
- Increase public awareness about what the Service does and how its conservation activities contribute to values that are important to the American people.

Effectively implemented, the National Outreach Strategy will:

- Improve service to the public;
- Strengthen the credibility and stature of the Service;
- Make it easier for employees to carry out their natural resource management responsibilities;
- Improve support for the agency's resource mission; and
- Build new partnerships.

What is "Outreach"?

"Outreach" in the U.S. Fish and Wildlife Service has become a generic term that means different things to different people.

Several years ago, a Service "white paper" defined "outreach" as "any effort designed to communicate information to, impart knowledge to, promote involvement by, or create behavioral change in the public regarding fish and wildlife resource issues."

This definition is strong in most respects, but leaves out the concept that effective communication is two-way: it involves listening, seeking out the views of stakeholders, noting the concerns of others, and changing Service actions when appropriate.

Thus, this strategy will adopt a version of the outreach definition used by Region 7:

Outreach is two-way communication between the U.S. Fish and Wildlife Service and the public to establish mutual understanding, promote involvement, and influence attitudes and actions, with the

goal of improving joint stewardship of our natural resources.

Outreach includes but is not limited to the following:

- Congressional relations
- Corporate relations
- News media relations
- Relations with constituent groups
- Community relations
- State and local government relations
- Relations with State wildlife agencies
- Environmental education and interpretive activities
- Public involvement
- Traditional public information activities such as speeches, open houses, etc.
- Information products, such as brochures, leaflets, exhibits, slide shows, videos, public service announcements, etc.

How Was the Strategy Developed?

The national outreach strategy arose from the concerns of former director Mollie Beattie, who noted that many of the issues that reach the Director's desk were communication issues as much as natural resource issues. She tasked the Assistant Director-External Affairs with coming up with a strategy that will help the Service develop and apply its outreach resources more effectively.

The Directorate discussed outreach at the June 1996 Directorate meeting (action items from that meeting are included in the Appendices to this document). Each Regional Director and Assistant Director was asked to designate a person to serve on a team that would develop the National Outreach Strategy. This team met in November 1996 to draft this strategy paper. Development of the draft included a review of earlier Service outreach policy documents, Regional outreach plans and handbooks, public opinion research, and information on State communication programs.

A draft of this document was shared with a larger group of Service employees (including some field project leaders, GARD's, divisions chiefs, public outreach specialists, and others) for comment before being presented to the Directorate in March 1997.

Responding to Changes in Technology and Public Attitudes

The Service faces a number of communication challenges that did not exist just 5 years ago.

For example, the internet now makes it possible for inaccurate information to spread and be picked up nationwide in a matter of minutes—a phenomenon that can, and has already, affected public perceptions about the Service.

Increased public distrust of government in general has made it more difficult for natural resource agencies to do their jobs. In the Service, endangered species listing and recovery efforts and acquisition and management of some refuges have been especially affected.

Core environmental programs have been the subject of intense political debate. At the same time, private groups have filed many lawsuits challenging actions by the Service and other resource agencies.

Such efforts increase the demand for information on how Service programs work. There is a higher level of public scrutiny and debate over activities that traditionally were not controversial.

The changes of the last few years make it more critical than ever for the Service to support its resource mission with a strong, coordinated communications program.

Overcoming Obstacles to Effective Outreach

There are many obstacles to effective outreach. In analyzing its own outreach efforts, Region 5 identified some of these, which also apply to Service outreach efforts nationwide:

- Lack of trained outreach/communication specialists;
- Lack of funding;
- Resistance to coordinating outreach efforts;
- Lack of consistency throughout the Region (Service);
- Lack of accountability;
- Multiple definitions of outreach (issues management vs. environmental education);
- Lack of clear messages; and
- Divergent views of which audiences to target.

In reviewing this document, Service employees identified a number of other obstacles, including a lack of understanding or awareness of the viewpoints of various segments of the public.

The actions recommended in this strategy will overcome these obstacles and create a stronger communications program. The major need for increased resources comes in employing professional communicators in a limited number of key positions, and in training our existing workforce.

What Does the Public Know About Us?

Effective communications must be based on an understanding of existing public knowledge and attitudes.

The Service has no public survey data on how well known the agency is or how much the public understands about our work. This deficiency hampers virtually every Service communications effort. The Service has not previously gathered this information because of restrictions on public surveys under the Paperwork Reduction Act.

Anecdotal evidence suggests that the Service is little known beyond a few basic constituent groups. Our own employees often note that the public confuses us with state wildlife agencies, BLM, National Park Service, Forest Service, and EPA. In analyzing results of its Congressional outreach efforts, Region 5 reported that many people they contacted did not know what the Service does.

Our own communications often don't help the public identify us. We often talk about our individual field stations, regions, or programs, without putting them into the larger context of

the U.S. Fish and Wildlife Service and its mission.

Some of our own employees view the notion of explaining how the Service contributes to important national values as "promoting the Service." They say the emphasis of Service communications should be on "promoting the resource."

Certainly one of our major communication goals is to convey why fish and wildlife conservation are important. But that message alone does not necessarily result in constituents who are ready to act to support or partner with U.S. Fish and Wildlife Service programs.

Usually when we are communicating, we are talking about specific things the Service is doing, or wants to do, to benefit the resource. For that information to be credible, its source—the U.S. Fish and Wildlife Service—must be credible. So employees do need to be concerned about public knowledge and perceptions of the Service. Wider public knowledge of what the Service does, and why we do it, will help the public make better informed decisions.

The Service already expends significant resources on education and outreach; by redirecting and focusing these efforts to become more strategic, we can reduce the need for specific funding increases for outreach. In any regard however, it is clear that the Service's current investment in communication is not adequate and does not match the level of public concern and political controversy that its programs are generating.

What We Learn From Public Opinion Research

While we have little information about how the public views the Service specifically, we do have public opinion research data about how Americans see the environment. This information provides critical background data that the Service must use to communicate with the public.

Data from several different polls conducted during the 1990's consistently show that Americans think protecting the environment is important, but most hold this belief for reasons that directly relate to human health and welfare. They also respond to the values of stewardship (preserving the environment for future generations or because it is God's creation). Arguments that species should be protected simply because they exist, or because they have an intrinsic right to be, are less likely to sway most people than reasons

associated with human health or stewardship.

People also respond best to a moderate, practical tone, because they feel many environmental issues in the past have been exaggerated. Service communications should avoid sensation and hyperbole. Surveys have found that absolute, strong language often backfires. Service communications should focus on how saving fish and wildlife and their habitats help *people* as well as fish and wildlife. A more complete explanation of the polling data can be found in Appendix III of this document.

In sum, Service employees need to remember to talk about the U.S. Fish and Wildlife Service, not just their Region or program, and they need to explain their work using simple, moderate, practical messages that people can relate to.

What Should the Service's Messages Be?

Americans today are bombarded by information. Because they can't possibly respond to all this information, they only respond to things they care about—and they may make that decision within just a few seconds. The Service needs to simplify its messages so the public can easily see why they should care and what they can do to help.

Every Service communication with the public should (1) establish that the U.S. Fish and Wildlife Service does the work being described, and (2) clearly explain how this work benefits people.

We want Americans to know three basic things about the U.S. Fish and Wildlife Service: who we are, what we do, and why we do it.

All Service programs and activities can be explained using one or more of the following messages.

- The U.S. Fish and Wildlife Service is a Federal agency whose mission, working with others, is to conserve fish and wildlife and their habitats.
- The Service helps protect a healthy environment for people, fish and wildlife.
- The Service helps Americans conserve and enjoy the outdoors.

These messages describe how we are different from other government agencies, and why our work is important to people.

The purpose of these basic messages is to encourage employees at all different locations to *build upon each other's work* by consistently repeating the same messages—reinforcing simple ideas about what the Service does and why we do it.

Using these consistent messages also will help employees think about what they need to communicate and simplify it into something that has meaning to people's deeply held values and beliefs.

The Service may also wish to develop a single "tagline" or slogan that can be used in association with the agency's name, and that reinforces the Service's mission using just a few short words.

How Do Employees Use The Messages?

Repetition and consistent use by Service employees across the nation is the key to success of this effort.

The messages can become the theme of a talk to a local organization; they can be used in fact sheets and brochures; they can be the basis of an interview with a local news reporter; they can be the headlines of an exhibit. Region 3 employees have already used the messages to help develop briefing papers and fact sheets for Congressional offices. These are just a few of the ways in which consistent messages can be used.

Service employees who are communicating with the public should take the time to explain, briefly, what the U.S. Fish and Wildlife Service does—and they can do so using these “messages” as their talking points. The specifics of their own program or activity can then be “stepped down” under one or more of these bullets. So, for example, Law Enforcement or Federal Aid activities can be described under “helping Americans conserve and enjoy the outdoors.” Employees who work in the contaminants, endangered species, or wetlands programs can explain how their work helps “protect a healthy environment for people, fish, and wildlife.” And so on for other Service programs.

Individual Service programs and activities *do* have a need for messages that are specific to their needs. These messages should be tied to resource priorities.

A number of Service programs—Federal Aid, Habitat Conservation, Migratory Birds, for example—are developing individual outreach strategies to meet their own needs. Similarly, specific activities such as wolf reintroduction into the Yellowstone ecosystem or the reintroduction of condors in Arizona, have their own unique communications needs.

These individual communication strategies can develop core messages that are specific to their own needs, while still reflecting the Service's overall messages. For example, a Federal Activities biologist can develop messages to explain how denial or approval of a federal permit will affect clean water (the healthy environment portion of the Service's message).

Outreach strategies for individual programs should be coordinated with each other and with External Affairs to make sure they are not sending competing or conflicting messages, and to ensure that they all communicate the U.S. Fish and Wildlife Service's mission—not just the mission of their own program. This coordination is crucial if we are to begin showing the American people how our individual programs and projects relate to a larger agency and conservation purpose.

Identifying Our Audience: Who Are We Talking To?

Most Service employees already know there is no single "public" with whom we must deal, but rather a variety of "publics" who have different concerns and interests. Broadly speaking, the Service's publics include State agencies and other wildlife professionals, conservation groups, sportsmen, educators, Congress, Native Americans, outdoor and environmental news media, the agricultural community, and many others.

A great deal of work has been done by Service Regions and programs to further identify and refine who these "publics" are. For example, the Refuge System's 100 on 100 campaign identifies five distinct external constituencies: Congress, corporate sponsors, communities, conservation groups, and communications media. Described as the "Five C's," these audiences are also relevant to the national outreach strategy.

Service employees should also be aware that studies show that people believe information received from peers and community authority figures (teachers, ministers, other experts) more than they do newspapers and sources outside the community. Service employees in each community need to identify these respected individuals and get to know them. The Service is supporting this effort through policies encouraging employees to join local organizations.

Identifying Our Audience II: Why are We Talking to Them?

The Service also needs a greater effort to address audiences systematically. The Service needs communication methods and tools to speak to its various publics individually. Development of these tools, and a systematic approach to identifying opportunities to address key audiences, is an effort that will take those two key ingredients—time and resources—to develop.

Our goal is to incite action. We are not looking for sympathy—we are looking for support!

That means our most important audiences are *decisionmakers* and *opinionleaders*. These could include local Congressmen and members of their staffs, county or city officials, State legislators, local business leaders, leaders of local conservation, sporting, and agricultural groups, members of the news media, affected landowners, and others. Each Service manager will want to know the key people on each issue in the local area.

The most effective use of our time and resources is to communicate with people like these—who can either broaden our audience and help us get information to the public, like the news media, or who can help determine whether our projects succeed.

Building Relationships and Establishing Credibility

The most important element of communication is building relationships with the people we are communicating with. It's better not to wait until we have a crisis before we call the county commissioners or the local paper. A neighbor who only comes to see you when they want to borrow a cup of sugar or your favorite hammer wears out the welcome mat pretty quickly. If we only talk to our "neighbors" when we have business to do, then we may not be in business for long.

Our jobs will be much easier if we have built a relationship with those key people early, so that by the time a difficult issue comes along they already know us and (hopefully) regard us as credible people they can work with.

The Director must lead this effort by holding regular meetings with representatives of Service constituent groups, members of Congress, and others. This effort should be further carried out by Regional Directors and GARD's, who should be certain to meet regularly with Governors, Congressional representatives, State directors, local and regional conservation group leaders, and many others.

Project leaders should also know the local Congressional representatives, leaders of community organizations, news reporters, counterparts in other natural resource agencies, and so on.

The Washington Office, Regions, and project leaders should have systematic plans for meeting with constituent groups. These relationships will tell us who can be most effective in helping to get a job done, what is likely to be our biggest obstacle, how we can work with the concerns of others, and what we will have to do to accomplish our resource priorities.

Many Service employees are still not comfortable with the idea that it is OK for them to contact Congressional district staffers, news reporters, and others. At the field level, project leaders determine who is responsible for Congressional contacts. The Service must provide additional guidance on these issues. In addition, Service managers must be evaluated and

rewarded for establishing strong relationships with key people in their areas. Building these relationships must be seen as critical to the Service's resource mission, rather than something that is secondary to our "real" work of fish and wildlife conservation.

The key to making these relationships work is our credibility as individuals, and as an agency. No communication program works if the source of the information is not considered an authority on the subject, or if the representatives of the agency are seen as unresponsive, uninterested, or unfair. Service employees must stand up for the resource, but in doing so they must demonstrate awareness of and concern for community interests. Once again, this is where it becomes important for the Service to have a clear message about why our work—particularly on a controversial issue—will benefit people as well as fish and wildlife.

The Service can build this credibility if employees:

- build relationships with key figures;
- establish their identity and credibility with the media;
- make the Service an integral part of the community in their areas;
- work to establish themselves as responsive public servants who listen to public concerns;
- identify Service employees who are experts in their fields, and make them available to represent the Service on key issues.

Building a Capability for Better Communications

Good relationships with key people will help us avoid the fire drills and crises that most of us are too familiar with. But inevitably, there are going to be bad days: your local Senator hates a new policy decision; a constituent group is suing you; the city paper has run an outrageous editorial; there is a disturbing wildlife die-off at a refuge—you name it. With its great variety of responsibilities and the public's keen interest in wildlife, the U.S. Fish and Wildlife Service on any given day is a communications crisis just waiting to happen.

To handle these situations, the U.S. Fish and Wildlife Service needs people who are trained in dealing with the news media and elected officials. Just as some situations require a skilled fisheries biologist or waterfowl manager, some situations need the skills of a communications professional.

Service managers must recognize that special skills are required to write and speak clearly and to deal with fast-breaking news. The Service needs experienced, trained communications professionals at selected key locations. This is especially important for field offices that are dealing with many controversial issues.

Some Service employees do not see value in working with the news media because they perceive that the media are interested only in controversy. A skilled and experienced professional communicator can identify and realize opportunities for the good news that the Service can and should be making every day.

Position descriptions for outreach jobs should require experience in news media or Congressional relations appropriate to the role in the organization. In selecting people for these jobs, the Service should wherever possible convene panels including public affairs or legislative specialists. Project leaders should consult with the ARD-EA about what sorts of qualifications are needed for particular outreach positions, and should involve the ARD-EA in reviewing the applicants.

Departmental regulations require the establishment of information-related and Congressional liaison positions, and the selection of individuals to fill these positions, to be approved by the Secretary's Office of Communications. These regulations are enforced for positions that involve significant interaction with the news media, whether or not they are classified as GS-1035 public affairs specialist positions. The Departmental clearance requirement has not generally been extended to refuge-based ORP positions. However, where these positions require significant news media or legislative outreach, they are subject to the clearance requirement.

The ARD-External Affairs will help project leaders obtain the required Departmental clearance for public outreach/public information positions. Historically the Department's Office of Communications has been very supportive of improving bureau communication resources through the hiring of qualified individuals for these positions.

A "No Surprises" Policy for Outreach

We can identify our message and target our audience, but we've got to get our message out in a timely way.

The Service's goal for communications should be a "no surprises" policy. Key Congressmen, local leaders, landowners, conservation groups, States and others do not like to be surprised by newspaper headlines announcing an important decision they knew nothing about.

A timely briefing or simple "heads up" about an upcoming decision can help avoid misunderstanding and build good will. However, such notifications must be carefully planned and timed so they do not result in premature news stories.

Each major Service decision or policy announcement should include planning for how and when outreach will be conducted, who needs to be contacted, what the message is, and who is responsible for carrying out the outreach. Such outreach plans are already prepared for endangered species listing decisions.

Both the Service and the public will be better served by this type of timely, coordinated, and planned communication on major issues.

Whose Job is Outreach?

Several employees who reviewed this document objected that hiring communications professionals would relieve other employees of the need to do outreach. "Outreach should be everybody's job," they observed.

Other Service employees counter that in the past, by making outreach everybody's job, it has become "no one's responsibility."

Outreach does indeed need to be part of everybody's job. The role of the communications professional is not only to promote positive stories and respond to crises, but also to provide advice, tools, and expertise to other employees to make our communications more

effective. Experience in several field offices has shown that the presence of an experienced public affairs officer can be of enormous help to project leaders. As one project leader explained, his office was trying to do communications before—they just weren't doing it very well. Bringing a public affairs specialist on staff improved the efficiency and effectiveness of the resources being devoted to communication.

Training programs to increase the communications skills of Service biologists and managers will continue to be encouraged. NCTC is building outreach into the project leader training scheduled to begin in 1998.

Where Does Education Fit Into "Outreach"?

Environmental and conservation education are important to the Service's long-term mission. In some communities, our environmental education programs are the most effective way to establish and improve community relations. Many strong education programs have been developed that are helpful to the agency's resource goals.

In the context of the Service's overall outreach/communications program, the education community is only one of the Service's publics. Education programs are not a substitute for effective relationships with decisionmakers and opinion leaders.

Education programs should be a part of a strategy to reach key community leaders, like teachers, school board members, elected officials, and the news media.

At many locations, it is more critical to use limited outreach resources to work with local leaders and the news media than to develop another environmental education curriculum. Service managers need to be sure they have a balance of these activities in their overall outreach programs. If limited resources dictate a choice between education programs and outreach to decisionmakers and opinion leaders, education programs should be a lower priority.

Education programs can and should support specific Service resource issues. For example, an education program could be used to explain reintroduction of an endangered species, or why a particular refuge needs to conduct prescribed burns.

Many of the education programs and curricula used by Service employees today do not mention the U.S. Fish and Wildlife Service and its mission. When that happens, Service employees should add some basic information about the Service for students, teachers, and parents.

Service managers can take advantage of the innate appeal of education programs to improve their outreach to key audiences, for example by inviting news media or local officials to join children learning about marsh life. Inviting the news media can broaden the audience for an education project beyond a single class or school to thousands or perhaps millions of people, who then are exposed to a positive image of what the Service is doing in their community.

In sum, to support the Service's outreach goals, environmental education programs should:

- include information about the Service and its mission;
- help build community relationships;
- support specific Service resource priorities;
- make the most effective use of Service resources (for example, teaching teachers);
- serve the needs of field stations; and
- reach the broadest possible audience.

Specific recommendations for improving the distribution and use of Service education resources should be made by the Service's National Conservation Training Center working in partnership with the Regions.

Toward a "Corporate Identity," or, Looks Count

National corporations know that looks count. They go to enormous expense to develop corporate logos, slogans, uniforms, and unified standards for their places of business.

To identify itself in the public mind, the U.S. Fish and Wildlife Service needs to move toward developing a visual identity.

This includes publications, exhibits, internet, signs, uniforms, and vehicles.

In addition, the Service's communication tools, such as brochures, internet, and audiovisuals, need to be reviewed and updated to ensure they are meeting the Service's communication needs.

Publications

The Service has many publications, videos, exhibits, and other outreach materials. Most of these materials have not been recently reviewed to determine whether they are effectively distributed, whether they meet the Service's communications needs, and whether the public actually likes them.

Service publications only recently began to have standard design and unified visual identity. To address this issue, in October 1996, a small group of Service design and publications staff met in Minneapolis. They have developed recommendations for a unified "look" for Service publications, and an implementation schedule for achieving that look. Their recommendations were presented to the Directorate in November. As a result, a unified design for Service publications has been adopted, and will be required for all new

publications. A unified "look" for Service publications will be a major step toward clarifying the Service's image and public identity.

In addition, the Service should review its communication tools and interview Washington and Regional staffs to determine needs for new or revised products. Incorporating its key messages, the Service should then develop these materials as available funding permits. The Service should review the distribution mechanisms for these products to ensure they are reaching their intended audiences, and should develop more effective mechanisms for evaluating the effectiveness of its communication tools.

The approval process for publications, audiovisuals, and exhibits should be reviewed to ensure that it is working efficiently and that new products conform to the unified design standard and support the messages about the Service's mission and the individual program messages to be developed later.

All employees should be notified of the availability of new products through the Service newsletter and other means.

Uniforms, Signs, and Vehicles

Efforts are well underway to upgrade signage at Service facilities. The Service recently has adopted policies concerning vehicles and uniforms that will also greatly strengthen our public image.

One "outreach" step that can be taken immediately, and easily, is for uniformed Service employees to wear their uniform whenever they will be filmed for news media,

documentaries, magazine articles, etc. This gives viewers and readers a visual cue that the employee being depicted works for the U.S. Fish and Wildlife Service.

Special Events

The Service also celebrates numerous special "days", "weeks" and events, such as National Wildlife Refuge Week, International Migratory Bird Day, National Fishing Week, National Hunting and Fishing Day, the Duck Stamp contest, and others. Many field stations also participate in local festivals. Some field stations with limited resources find it difficult to support many different events each year.

These special events can be excellent tools for promoting the Service's message, and in the future the Service may want to examine the possibility for identifying annual "themes" that each of these celebrations could reinforce. For example, the State of Missouri, noted for its conservation education programs, identifies four "themes" yearly which are promoted in its publications, magazine, and visitor facilities. The Service may wish to examine in greater depth which events it wants to focus its resources on, and determine whether it is feasible to establish annual themes for these events.

Making Outreach Work

Outreach must become an integral part of the Service's resource management program. For this to happen, it has to be somebody's responsibility.

Currently the Service has no one who is responsible, on a national level, for ensuring that all outreach programs are coordinated, that the Service is giving consistent and not conflicting messages, and that resources are being effectively used. Likewise, the Washington Office (and some Regions) have no mechanism for ensuring coordination of outreach programs among various divisions, programs, or field stations.

The Directorate has approved establishment of a National Outreach Coordinator, whose role will be to ensure the implementation of the national outreach strategy. The coordinator will:

- Lead a national outreach team that will assist in the following tasks;
- Develop a national outreach handbook to aid employees;
- Develop and carry out outreach partnerships with corporations and private groups to broaden the Service's audience;
- Ensure that outreach plans for major decisions are developed and carried out;
- Establish relationships with and identify opportunities to reach new audiences and key constituent groups;

- Complete development and testing of the core Service "slogan" or message;

- Assist Programs and Regions in identifying and developing needed communication products and activities that can be used Servicewide, so that the Service can get the most benefit from its limited outreach resources;

- Work with programs, regions, and the directorate to coordinate outreach for major national events;

- Work with programs and regions to develop specific "stepped down" messages that can be used consistently nationwide;

- Improve communication among Service employees about how they have used outreach effectively;

- Work with NCTC on outreach training programs; and

- Develop mechanisms for evaluating the effectiveness of Service communications.

Summary: How Do We Get There From Here?

To have an effective national communications program, the U.S. Fish and Wildlife Service needs to have:

- Policies and leadership to reinforce the importance of unified communications;
- Communication tools that make it easier for employees to do their jobs;

- Consistent messages that employees use in all communications;

- Strategies for making outreach work;

- Effective communications training for employees; and

- Professional communications staff to assist other employees.

Action Items

1. The Service directorate will adopt the national outreach strategy. The Director will issue a memorandum directing the Service to take the needed actions to implement the strategy, including:

- Using the basic Service messages;
- Including information about the Service and its mission in all external communication efforts;
- Developing and carrying out outreach plans for major decisions and actions;
- Building relationships with Service constituents;
- Requiring media and congressional experience for key field outreach positions;
- Involving the ARD-EA in the process of establishing and filling key field outreach positions.

(AEA: April 15, 1997)

2. The Service will establish and fill a position for a National Outreach Coordinator and will establish a national outreach team to help carry out the national outreach strategy. (AEA: June 1997)

3. The Service will continue to improve the way it presents itself to the public by:

- Adhering to the new publication design standards (AEA, Service Design Committee);
- Developing guidance designed to improve Service signage and uniform policy (FWS uniform and sign committees, AEA);
- Using the name "U.S. Fish and Wildlife Service" and, where possible, the Service logo, prominently in *all* communications intended for external audiences. (Service directorate).

4. The Service will complete the staffing of Regional External Affairs organizations and will proceed with hiring of professional communications staff in key hot spot areas to assist geographic/ecosystem managers. (RD's; ongoing)

5. The National Outreach Coordinator will work with the National Conservation and Training Center and Regional staffs to develop a national outreach handbook and to provide other appropriate outreach training for Service personnel. (AEA with NCTC and outreach team; June 1998)

6. Where education programs have been identified as a priority, they will (1) include information about the Service's mission; (2) make the most efficient use of Service resources and serve field station needs; (3) seek opportunities to help build community relations and reach the broadest possible audience. (Service Directorate, ongoing)

Appendix I: Background of the Service's Outreach Programs

The U.S. Fish and Wildlife Service has examined "outreach" on a number of occasions. In 1992 a team of Service employees put together a "white paper" called "Outreach in the U.S. Fish and Wildlife Service." This paper noted that "outreach" had become a commonly used term within the Service and attempted to provide information about and define the range of outreach activities.

This paper identified the various organizational units of the U.S. Fish and Wildlife Service responsible for conducting outreach activities, which were defined under four broad activities: public involvement, education, public affairs, and technical information.

The white paper was intended as a starting point for developing a coordinated outreach strategy. It resulted in a January 1993 "decision document" which recommended that the Service "strengthen its outreach programs by clarifying internal organizational responsibilities, providing technical guidance and training for its employees, and seeking additional resources in order to maximize the conservation of fish and wildlife resources through the actions of an informed and committed public."

The decision document found that the Service's outreach activities suffered from "a lack of organizational focus, program and technical guidance and training, and adequate resources". It said outreach is "the opportunity and responsibility of every element of the Service." This document recommended that:

1. National outreach strategies should be prepared by each program subactivity in parallel with the FY 1995 budget process and coordinated with the technical staff offices.
2. Washington-level staff offices should prepare multi-year strategic plans for youth programs, environmental education, interpretation, and public information, and
3. Regional directors should have ARDs prepare simple outreach action plans for each program subactivity.

This document also recommended preparation of an outreach budget initiative for FY 1995.

Several Regions have developed outreach strategies. A 1992 Region 1 Outreach Strategy, prepared by a cross program team, expressed concern that the Service's message and mission were being "usurped" by other agencies and noted the Service's "uncoordinated and randomly executed patterns of outreach behavior." The Region 1 strategy defined objectives intended to meet the following goals:

- Foster public awareness of the mission of the Service and the positive contribution it makes to quality of life—theirs and that of fish and wildlife—now and for future generations

- Differentiate the Service from other natural resources agencies on issues and benefits that are important to key publics.

- Develop and maintain better understanding of our key constituencies to improve our public service

- Improve the image of the Service and increase outreach efficiency by focusing and integrating efforts across program areas

- Build on positive work and relationships of Service programs to enhance the public perception of the Service

- Focus outreach efforts on improving and building long-term relationships with important constituencies to accomplish the Service mission.

It is worth noting that the same concerns and goals identified by Region 1 four years ago apply equally well to the Service's national concerns in 1996.

In June 1994, Region 5 formed a cross-program team of outreach specialists to establish a framework for outreach planning with the Region. The Region subsequently published "One Step at a Time: An Outreach Workbook" to help employees design, implement, and evaluate outreach efforts and to promote outreach as a management tool that can be used to address resource issues.

This document defined "outreach" as: "Communications; the image of the U.S. Fish and Wildlife Service that each employee projects every day." Both Region 1 and Region 5 documents stressed that "outreach" is part of every employee's responsibility.

In 1995, recognizing the need to improve the Service's communications with a variety of publics, including Congress, the Service instituted an "external affairs" organization in the Regions that paralleled the Washington Office structure. Assistant Regional Directors—External Affairs were responsible for relationships with both news media and elected officials, and Regions began the process of establishing positions within the external affairs organization for legislative specialists who would focus on building relationships with States, counties, and other elected officials and local district offices for members of Congress. One of the major purposes for this organization was to ensure that the Service had informed and involved these officials concerning its decisions.

Service program areas also have embraced outreach. Refuges has developed a "100 on 100" campaign to increase public awareness of the National Wildlife Refuge system by its 100th birthday. Habitat Conservation, Federal Aid, and Migratory Birds also are working on outreach strategies. The Endangered Species division now requires outreach plans to accompany all listing documents.

While the existence of these programs demonstrates the Service's recognition of the need for outreach, these efforts have not been coordinated with each other to create unified messages or to develop the foundation for an overall, national Service outreach strategy. The Service's communications program continues to be fragmented, with individual Regions, programs and field stations carrying out independent communication programs. Such an approach misses the opportunity for employees to build upon each other's work by reinforcing consistent messages.

Marketing

"Marketing" for name identification alone works for beer and peanut butter, but not for resolving complex issues or burnishing an already tarnished or nonexistent reputation.

Marketing often sounds like an easy solution, and the Service has listened to the views of a variety of marketing experts in the past few years. Most have reinforced the message that the Service must target its audiences but none have developed a comprehensive communications strategy for the Service. These discussions have helped Service employees think about communications as an important tool in resource conservation.

Appendix II: Action Items from the June 1996 Directorate Meeting

1. Develop and test a unified Service message that identifies who we are and helps the public feel positive about us, and which would be incorporated into everyday communications including environmental education, media relations, Congressional relations, and community relations.
2. Complete the reorganization of regional External Affairs programs by filling positions for Regional Congressional Affairs specialists.
3. Refocus our current outreach capability to make it more strategic. Develop a national outreach strategy that will provide a unified Service message and strategies for incorporation into all Service outreach efforts. Establish and fill a national outreach coordinator position under the AD-EA.
4. Build media and Congressional relations qualifications into outreach positions at field stations. Develop standard position descriptions for all new outreach positions. Review and revise existing outreach position descriptions to incorporate media and Congressional outreach. Issue guidance to employees to implement this recommendation.
5. Implement ARD-EA review of all field outreach position descriptions and participation in selection process for new outreach hires at field stations.
6. Emphasize building relationships with key community leaders, decisionmakers at all levels, and opinion leaders in the public and private sectors as a higher priority than publications and other product development in ongoing outreach efforts. Issue guidance to employees that implements this decision.
7. Establish a team including Service employees, corporate leaders with publishing experience, and others to review Service publications and make recommendations for improving them to present a unified Service image and message; to review existing management processes to ensure that Service products are strategic, cost effective and reflect the Service's priority message; and to recommend evaluation processes for determining their effectiveness in achieving Service communication goals.
8. As part of the national outreach strategy, build a stronger communications capability by establishing and filling one public affairs specialist position to assist each GARD and locating these positions in key field offices.
9. Regional directors should distribute a memorandum encouraging project managers and other Service staff to inform and educate local members of Congress and their staff about Service activities and policies.

Appendix III: Results of Public Opinion Research

Peter Hart and associates in July 1996 reported that voters cited the following as their main reasons for supporting environmental protection:

- Humankind's interdependence on the natural world for existence and survival.
- Preserving the environment for future generations.
- The irreplaceability of the Earth and its natural resources.

A survey in April 1996 by Beldon and Russonello Research and Communications, conducted for the Consultative Group on Biological Diversity, reported the following support for a variety of reasons to protect the environment:

- Wanting one's family to live in a healthy, pleasing environment (79%)
- Responsibility to leave the earth in good shape for future generations (71%)
- Respect for Nature as God's creation (67%)
- Appreciation for beauty of nature (63%)
- A desire for a balanced environment so that one "personally can have a productive, healthy life" (59%)
- A patriotic feeling of an "American wanting to protect the natural resources and beauty of this country" (58%)
- The belief that "all life found in nature has a right to exist" (55%, the value with the smallest appeal).

This survey recommended that communications:

- focus on saving habitat and/or ecosystems, rather than individual species;
- show how humans need and benefit from saving habitat and species;
- lay responsibility for the increased loss of habitat and species on human behavior;
- strike a practical tone (advocate stopping the destruction of things that help humans, and focusing on habitat; avoiding sensationalism, exaggeration, and calls to save everything.)

This survey found that public support is strongest for conservation measures that clearly support human needs (such as clean air or water) and that the public needs strong examples of how the action called for benefits them, in their community. Support for conservation weakens when other issues (such as the impact on the economy) come into play; or when people don't clearly perceive that the problem is caused by human behavior or that the species in question has any direct benefits to people. The argument that all species have value does not work very effectively for some insects, rodents, and other species perceived as potential pests.

Other polls (Times Mirror 1992) also found that the public's environmental concern contains a strong emphasis on protecting human health. The public is very concerned about water pollution, toxic waste dumps, shortages of good drinking water, air pollution, and local problems such as shortages of land fill space, Times Mirror reported.

Outreach Plan Checklist

Use this checklist to help think through and organize your outreach needs.

Assessment:

- State the problem and why action is necessary in one clear, concise sentence.
- Who does the problem, issue, or situation affect?
- How does the current problem, issue, or situation affect fish and wildlife resources?

Audience(s):

- Which publics (individuals or groups) can we reach that will have the most influence to make change?
- What are the concerns, expectations, perceptions, and biases of the audience(s)?
- Describe the target audience(s) in one clear, concise sentence.
- List the Service and Departmental officials who should be informed of the issue or situation before you begin your outreach activity.
- List all Congressional districts and other Federal, state, county, or city officials who need to be contacted about the issue.
- List local, regional, and (if appropriate) national news media who will be interested in the issue.
- List constituent groups who should be contacted. (Be sure to consider conservation groups, agricultural and business interests, Native Americans, trade organizations, etc.)

Goal:

- What is the desired outcome of the outreach activity?
- How do we want our audiences to feel or act as a result of our efforts?
- State the outreach goal in one clear, concise sentence.

Message:

- What do we want our audience(s) to know or understand?
- How can we use the Service's three basic messages to explain why this issue is important to people as well as wildlife?
- State the main message in one clear, concise sentence.

Tools:

- What outreach tools are most appropriate to achieving our goal?
- Has each audience been addressed?
- List the tools to be employed in this outreach effort.

Schedule:

- Is there a specific date (such as publication of a Federal Register notice) that this issue or situation is tied to?
- List the specific outreach activities needed for this issue (for example, briefings, public meetings, press conference, etc.)
- Develop a schedule that shows when each event must occur.

Implementation:

- What personnel, funds, and supplies are needed to implement this outreach effort?
- What internal and external partners can be involved in this endeavor?
- What resources will we provide, and what will be provided by our partners?
- List a budget for this effort.

Reality check:

- Does every item listed above contribute to achieving your goal? Can any step be improved?
- Evaluate the effectiveness of each step after it has occurred, and revise your plan accordingly.

Sample Outreach Plan Format

Use this sample format for documents requiring outreach plans. You can adapt or modify the format if you need to, as long as you include the information covered here.

Title
(Outreach Plan for the _____)

Issue:
(State the issue in one or two sentences.)

Basic Facts About The Issue:
(In bullets or *short* paragraphs, outline basic facts about the action and why it is needed.)

Communications Goals:
(In a few bullets, state what you want to see as the outcome of your communications effort. If appropriate, address how the action will affect people and include what the Service will do to address public concerns.)

Message:
(In one short sentence, state why this issue is important to people and wildlife. Whenever possible, say how the action contributes to a healthy, clean environment; to outdoor recreation; or to preservation of important American heritage and traditions.)

Interested Parties:
(Identify groups/individuals who will be most affected or are otherwise interested in this action.)

Key Date:
(If there is a specific date the action is tied to, such as a court action or Federal Register publication, fill it in.)

Materials Needed:
(List materials that need to be prepared, such as press release, fact sheets, speech, talking points, charts, maps, photos, video, etc. Identify who will prepare the materials.)

Strategy:
(Explain your strategy for communicating this information. Do you plan to hold a press conference, for example, accompanied by in-person briefings for concerned groups? Can the information be communicated simply by news release, or perhaps only phone calls to key people are really required?)

Action Plan:

- (Under "interested party," list who needs to be contacted. Include Members of Congress or their staffs; State and local officials; news reporters; business/agricultural leaders; and constituent groups. Include groups who disagree as well as those who support the action.)
- (Under "method of contact," indicate whether person will be contacted by phone, personal meeting, briefing, etc.)
- (Under "person responsible," indicate what FWS employee or cooperator will make the contact.)
- (Under "phone/fax" list appropriate numbers so you'll have them handy.)
- (Under "date" list date when the contact is to be made.)

Interested Party	Method of Contact	Action Plan		
		Person Responsible	Phone/Fax	Date

